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Legal and Consulting Services

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- VIA ELECTRONIC MAIL ONLY -

March 15, 2022

Ms. Monica Onyszko, Corrective Action Project Manager
United States Environmental Protection Agency Region V
Land, Chemicals, and Redevelopment Division
77 West Jackson Boulevard – Mail Code LR-16J
Chicago, Illinois 60604
Email: onyszko.monica@epa.gov

Thomas Williams, Esq.
United States Environmental Protection Agency Region V
Office of Regional Counsel
77 West Jackson Boulevard
Chicago, Illinois 60604
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*Re: RCRA Section 3007 Request for Information Dated January 11, 2022
Former Wheeling-Pittsburgh Steel Martins Ferry Plant (OHD010448231)*

Dear Ms. Onyszko and Mr. Williams:

Attached hereto, please find Mull Group, Inc.'s response to the above referenced request for information by USEPA under Section 3007 of the Resource Conservation and Recovery Act (RCRA), 42 U.S. Code 6927(a). This response is also being provided on behalf of 4K Industrial Park LLC (4K). The subject property located at 1001 Main Street, Martins Ferry, Ohio is the site of a former Wheeling-Pittsburgh Steel facility. This property is owned by 4K. Mull Group, Inc. holds no legal interest in the property.

The property was acquired by 4K in 2012 under an order of the United States Bankruptcy Court for the District of Delaware in connection with the WP Steel Venture LLC, RG Steel LLC bankruptcy, Case No. 12-1161 (KJC). Pursuant to Section 363 of the Bankruptcy Code and the court's order, the subject property was acquired by 4K free and clear of all interests "of any kind or nature whatsoever". Given this, 4K is not a successor in interest to Wheeling-Pittsburgh Steel or any other entity related to Wheeling-Pittsburgh Steel.

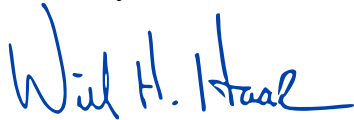
www.haaklawllc.com

Cleveland, Ohio

Admitted to Practice in Ohio, Florida, and Kentucky

Please contact me with any questions.

Sincerely,



~~William H. Haak~~

Haak Law LLC

Cleveland, Ohio

Attorney for Mull Group, Inc.

and 4K Industrial Park LLC

cc: Erik Hagen, Ohio EPA, erik.hagen@epa.ohio.gov

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**United States Environmental Protection Agency
Request for Information Pursuant to RCRA §3007**

Mull Group, Inc.'s and 4K Industrial Park LLC's General Objections

1. Mull Group, Inc. ("Mull Group") and 4K Industrial Park LLC (4K) object to each and every definition, instruction, and request to the extent that it purports to impose requirements or calls for production of documents or narrative responses beyond the scope of USEPA's authority under applicable statutes and regulations, including, but not limited to, RCRA §3007.
2. Mull Group and 4K object to each and every request to the extent that the information or documents sought are unreasonably cumulative, duplicative, not in Mull Group's or 4K's current possession, custody, or control, or are obtainable from some other source that is more convenient, less burdensome or less expensive. In particular, Mull Group and 4K object to these requests insofar as they seek information already in the possession of USEPA or accessible from an alternative public source. Any document produced by Mull Group and/or 4K that is already in the public domain shall not be construed by USEPA as a waiver of this objection.
3. Mull Group and 4K object to each request to the extent that it seeks information protected from disclosure by any privilege or immunity, including the attorney-client privilege, common-interest privilege, attorney work product doctrine, the laws relating to confidentiality of business records, trade secrets, and other corporate proprietary information, or any other privilege, immunity, doctrine, or rule of confidentiality, including, but not limited to, any and all Federal and/or State privacy laws. For purposes of responding to these requests, Mull Group and 4K will construe each definition, instruction, and request as not seeking information regarding legal advice and/or any other confidential communication exchanged between Mull Group and/or 4K and its attorneys (in-house and/or outside counsel) and agents thereof. Furthermore, Mull Group and 4K will construe these requests as not seeking legal memoranda, attorneys' notes, or any other documents or communications that have come into existence because of USEPA's investigation or any other legal matter in which a right of privilege might arise. Altogether, no documents or information subject to this objection will be provided by Mull Group and/or 4K.
4. Mull Group and 4K object to these requests to the extent they are vague, ambiguous, overbroad, unduly burdensome, oppressive, and unduly time consuming.
5. Mull Group and 4K object to these requests to the extent that they seek to have it exert control over persons or entities who are not parties to this matter and over whom Mull Group and 4K have no control, or to identify documents or information not in their custody, control or possession. Mull Group and 4K object to each request to the extent that it purports to require either entity to obtain information from individuals or entities who once were, but no longer are, affiliated with Mull Group or 4K and/or to produce information equally available to USEPA from third parties. Any such request is unduly burdensome, overly broad, and vague.

6. Mull Group and 4K object to these requests to the extent they do not identify a time period, thereby rendering the demand overbroad, unduly burdensome, oppressive, unduly time consuming and/or outside the scope of USEPA's investigative authority.
7. Mull Group and 4K object to these requests to the extent that they do not identify the information and documentation to be provided with reasonable particularity. Mull Group and 4K will respond to each request as they understand and interpret them as of the date of this response.
8. The responses made herein are provided without conceding that all or any part of the requests seek relevant or admissible evidence or information necessary to USEPA's investigation of this matter and are made without waiver of Mull Group's and/or 4K's rights to contest the relevancy, admissibility or necessity of any of the requests or their responses thereto.
9. Mull Group and 4K object to each request which calls for opinions, conclusions of law, conjecture, and/or suspicions not required to be supplied to USEPA under its statutory/regulatory authority.
10. Mull Group and 4K object to each request to the extent that it seeks information about any entity or "person" other than Mull Group or 4K in that neither entity has knowledge or information sufficient to form a reliable response to such inquiries.
11. These General Objections apply to each of USEPA's requests and are incorporated by reference into every response set forth below. By responding to an individual request, Mull Group and/or 4K do not waive any general or specific objection, nor does they waive any objections as to the competency, vagueness, ambiguity, undue burdensomeness, invasiveness, irrelevancy, immateriality and/or inadmissibility of these requests. Mull Group and 4K expressly reserve, but do not limit any reservation to:
 - (a) the right to object, on the grounds of competency, irrelevance, immateriality, privilege, inadmissibility as evidence for any purpose, or on any other ground, to the use of the information provided in response to these requests in any subsequent proceeding involving or related to the subject matter of USEPA's inquiry; and,
 - (b) the right to object on any ground to subsequent requests involving or relating to the subject matter of USEPA's inquiry.

Mull Group, Inc.'s and 4K Industrial Park LLC's Responses to USEPA's Information Requests Regarding the Former Wheeling-Pittsburgh Steel Martins Ferry Plant

1. Provide a written description of the corporate structure of Mull Group and its relationships to or dealings with 4K Industrial Park LLC (4K), RG Steel LLC, Severstal US Holdings LLC, OAO Severstal, Severstal Wheeling, Inc., Esmark Incorporated, Wheeling-Pittsburgh Corporation, and Wheeling Pittsburgh Steel Corporation. Provide true, accurate, and complete copies of all documents in your possession, custody or control that contain information responsive to this request, including but not limited to all articles of incorporation, corporate bylaws, records of merger or acquisition, records relating to trade name usage, and minutes of corporate meetings.

Answer:

Mull Group is wholly-owned by W. Quay Mull II. 4K is "affiliated" with Mull Group only in that Mr. Mull owns 50% of 4K along with Joseph N. Gompers (who also owns 50%). In addition, Mull Group provides management services to 4K for a fee. There is no other relationship between the entities. Mull Group has no relationship or dealings with RG Steel LLC, Severstal US Holdings LLC, OAO Severstal, Severstal Wheeling, Inc., Esmark Incorporated, Wheeling-Pittsburgh Corporation or Wheeling Pittsburgh Steel Corporation. Mull Group has never had a relationship or affiliation with any of these entities. See below for a discussion of 4K's purchase of the subject property out of bankruptcy.

After a reasonable and diligent search of all available records, Mull Group was unable to identify any of the corporate documents requested – with the exception of articles of incorporation and corporate bylaws for WQM Industries, Inc., and an amendment to the articles of incorporation for WQM Industries, Inc. changing the entity's name to "Mull Group", Inc. True, accurate, and complete copies of these documents are attached hereto as Appendix A.

2. Provide a written description of the ownership or operational history of the Facility or any portion of the Facility, including but not limited to the approximate dates of Mull Group's ownership of any portion of the Facility and the date(s) on which Mull Group acquired or began operating on any portion of the Facility.

Answer:

As noted in Mull Group's cover letter to this response, the property located at 1001 Main Street, Martins Ferry, Ohio is the site of a former Wheeling-Pittsburgh Steel facility. Mull Group has no ownership interest in the property. The property was acquired by 4K (fka "Aldiny, LLC") on September 19, 2012 under an order of the United States Bankruptcy Court for the District of Delaware in connection with the WP Steel Venture LLC, RG Steel LLC bankruptcy, Case No. 12-1161 (KJC). Pursuant to Section 363 of the Bankruptcy Code and the court's order, the subject property was acquired by 4K free and clear of all interests "of any kind or nature whatsoever". Given this, 4K is not a successor in interest to Wheeling-Pittsburgh Steel or any related entity.

4K's operations have been primarily limited to commercial leasing. 4K operated a water treatment facility (acquired with the Facility in 2012) to treat "brine" as that term is defined in Ohio Rev. Code 1509.01 under an authorization issued by the Ohio Department of Natural Resources. The water treatment facility operated from 2016 through 2018. The water treatment facility is maintained in operational condition, and could be restarted to treat brine if market conditions warranted. The Ohio Department of Natural Resources also authorized 4K to withdraw water from the Ohio River pursuant to Registration Number 02611. Water was withdrawn pursuant to this authorization at times during 2018.

3. Describe the nature of Mull Group's business at the Facility, and provide the date(s) when each operation and/or manufacturing process began at the Facility.

Answer:

Mull Group conducts no business at the Facility. 4K engages primarily in commercial real estate activities at the Facility. Since October 27, 2014, 4K has leased space at the Facility to Austin Master Services LLC (Austin Master). Since October 27, 2014, Austin Master has occupied space in Building 255 and Building 256, and has simultaneously leased a parking lot and 7.3 acres of unimproved land at the Facility. For a discussion of 4K's other business activities, please see the responses to requests 2 and 4.

4. Provide the following information about Mull Group's business at the Facility:
 - a. Provide a complete description of the raw materials and the operations and/or manufacturing processes utilized by your company at the Facility, and the products of your operations and/or manufacturing process; provide the dates during which such raw materials and processes were utilized at the Facility, and the dates during which such products were manufactured at the Facility.
 - b. If the nature of your business or manufacturing process has changed significantly since you acquired all or part of the Facility, please describe the nature of your prior business, and provide the date(s) on which changes to the business or manufacturing processes occurred.
 - c. Describe in detail the nature of your current and past activities or business at the Facility with respect to processing, storing, treating, disposing, or otherwise handling wastes and materials at the Facility; provide the date(s) on which changes to such waste-handling activities changed at the Facility.
 - d. Provide true, accurate and complete copies of all chemical inventories and waste manifests in your possession, custody or control relating to your activities at the Facility, including historical information.

Answer:

- a. *Mull Group conducts no business at the property. 4K's operations at the facility are primarily focused on commercial leasing. 4K also operated a water treatment facility under an authorization issued by the Ohio Department of Natural Resources. The Ohio Department of Natural Resources authorized 4K to withdraw water from the Ohio River pursuant to Registration Number 02611. Copies of both Ohio Department of Natural Resources authorizations are attached hereto as Appendix B.*

- b. *Not applicable.*
 - c. *Mull Group has not engaged in any of the activities listed. In connection with its ownership of the Facility, 4K maintained a limited inventory of various raw materials. The materials in question were stored and managed as raw materials. No inventory of the materials is available. Some of these raw materials were used by 4K in connection with its operation of the Facility's water treatment facility. Materials remaining in September of 2021 were determined to be waste and characterized prior to being properly disposed in October, November, and December of 2021. See response to 4.d, below.*
 - d. *Mull Group and 4K are not in possession of any chemical inventories. In December of 2021, 4K generated and disposed of hazardous waste using RCRA ID# OHD010448231. A copy of the manifests for this disposal event are attached hereto as Appendix C.*
5. Provide true, accurate, and complete copies of all plans, diagrams, maps, and/or process flow sheets in your possession, custody or control depicting or describing operational processing units (e.g., distillate units, separators, tanks, pits, impoundments, piles and wells) as well as all above-ground and below-ground structures at the Facility. Include all historic and current aerial photos, and all figures showing current site configuration including surrounding land use if available.

Answer:

After a reasonable and diligent search of all available records, Mull Group and 4K were unable to identify any of the documents requested – with the exception of two (2) aerial images. True, accurate, and complete copies of these images are attached hereto as Appendix D.

6. Provide a written description of Mull Group's past and current waste generation and management at the Facility, including but not limited to past and current storage and disposal of hazardous waste onsite and transport, storage, and disposal offsite.

Answer:

Mull Group has not engaged in any of the activities listed. In connection with its ownership of the Facility, 4K maintained a limited inventory of various raw materials. The materials in question were stored and managed as raw materials. No inventory of the materials is available. Some of these raw materials were used by 4K in connection with its operation of the Facility's water treatment facility (please see the responses to requests 2 and 4, above). Materials remaining in September of 2021 were determined to be waste and characterized prior to being properly disposed in October, November, and December of 2021. See response to 4.d, above.

7. Identify all past and present solid waste management units and/or areas of concern at the Facility (e.g., waste piles, landfills, surface impoundments, waste lagoons, waste ponds or pits, tanks, container storage areas, etc.). For each such solid waste management unit, provide the following information:
- A map or diagram, if one exists, showing the unit's boundaries and the location(s) of all known solid waste management units, whether currently in operation or not. This map should be drawn to scale, if possible, and clearly indicate the location and size of all past and present units;
 - The type of each solid waste management unit, and the dimensions of the unit;
 - The dates on which the unit was in use;
 - The purpose of the unit and its past usage (e.g., for storage, disposal, spill containment, etc.);
 - The quantity and types of waste or other materials located in each unit;
 - The construction materials, composition, volume, size, dates of cleaning/maintenance, and condition of each unit; and
 - If the unit is no longer in use, describe how the unit was closed and what actions were taken to prevent or address potential or actual releases of wastes or waste constituents from the unit.

Answer:

Mull Group and 4K are unaware of any solid waste management units and/or areas of concern at the Facility that have originated or otherwise been identified during 4K's ownership of the property beginning on September 19, 2012. The answers to 7.a through 7.g, below, are limited in scope to the period since September 19, 2012 when 4K has owned the property. To the extent solid waste management units and/or areas of concern existed or originated at the Facility prior to 4K's ownership, both USEPA and Ohio EPA are reasonably believed to already be in possession of all information that is being requested.

- Not applicable.*
- Not applicable.*
- Not applicable.*
- Not applicable.*
- Not applicable.*
- Not applicable.*
- Not applicable.*

8. Provide a history of known leaks, spills, and other releases of hazardous wastes or hazardous constituents (releases or release) at or from the Facility, and provide true, accurate and completed copies of all related documents and reports in your possession, custody or control, including but not limited to narrative reports, field notes, sampling records, and laboratory analytical data and reports of analysis.

Answer:

Mull Group and 4K are unaware of any leaks, spills, or other releases of hazardous wastes or hazardous constituents at or from the Facility during 4K's ownership of the property beginning on September 19, 2012. To the extent any leaks, spills, or other releases of hazardous wastes or hazardous constituents occurred at the Facility prior to 4K's ownership of the property, both USEPA and Ohio EPA are reasonably believed to already be in possession of all information that is being requested.

9. For each identified release at or from the Facility provide the following information:
- The date(s) when such release occurred;
 - A detailed description of how the release occurred (e.g., how the material, substance or waste was being stored, delivered, transported or transferred at the time of the releases (to or from any tanks, drums, barrels, or recovery units), or how the waste was being treated);
 - The amount of each waste or material spilled, leaked, or released;
 - The specific location(s) where the release occurred;
 - A detailed description of all activities undertaken in response to the release or threatened release, including the notification of any local, state, or federal governmental agencies or offices;
 - A detailed description of all investigations of the circumstances, nature, extent, or location of each release or threatened release,
 - All records in your possession, custody or control containing information about any testing, sampling, or analysis of any soils, groundwater, or surface water, and any air testing undertaken; and
 - A complete list of all persons with information relating to the release, including each such person's address, telephone number, email address, and any other contact information.

Answer:

- Not applicable.*
- Not applicable.*
- Not applicable.*
- Not applicable.*

e. Not applicable.

f. Not applicable.

g. Not applicable.

h. Not applicable.

10. Describe any and all excavation and removal of contaminated soil from the Facility. For each excavation or removal, provide the following information:

- a. The amount of soil excavated, including the lateral and vertical extent of excavation;
- b. The location of excavation;
- c. The manner and place of disposal and/or storage of excavated soil;
- d. The dates of soil excavation;
- e. The identity of all persons involved in the excavation or removal of the soil;
- f. The reason(s) for the soil excavation;
- g. Whether the excavated or removed soil contained hazardous wastes or constituents, and an explanation of why the soil contained such substances;
- h. All analyses or tests and results of analyses of the soil that was removed from the Facility;
- i. The disposal location or destination of the contaminated soil; and
- j. All persons, including contractors, with information about (a) through (i) of this request.

Answer:

a. Not applicable.

b. Not applicable.

c. Not applicable.

d. Not applicable.

e. Not applicable.

f. Not applicable.

g. Not applicable.

h. Not applicable.

i. Not applicable.

j. Not applicable.

11. Provide a list of all local, state, and federal environmental permits ever applied for or granted for the Facility or any part thereof (e.g., RCRA permits, NPDES permits, etc.).

Answer:

The answer to request 11 is limited in scope to the period since September 19, 2012 when 4K has owned the property. A Title V air pollution permit (#P0089035) was issued to Wheeling-Pittsburgh Steel Corporation – Martins Ferry (Facility ID: 06-07-09-0013) on January 30, 2002. Following its acquisition of the property, 4K submitted Title V certifications clearly indicating that the Facility was idle and not operating during the applicable reporting period.

On May 9, 2014, 4K was issued NPDES Permit OH0011339. Wastewater was never discharged by 4K under this permit. The water treatment plant authorized to discharge under NPDES Permit OH0011339 was later converted to treat brine (see response to 4.a, above). No discharge resulted from 4K's treatment of brine. See also the Ohio Department of Natural Resources authorizations referenced elsewhere in this response (although Mull Group and 4K believe that these authorizations do not constitute "environmental" permits in the State of Ohio's regulatory scheme).

*On December 10, 2018, 4K was granted a stormwater No Exposure Certification (NEC) for exclusion from industrial NPDES stormwater permitting. The NEC was granted by Ohio EPA. A copy of the NEC for Ohio EPA Facility Permit Number 0GRN00248*FG is attached hereto as Appendix E.*

12. Provide true, accurate, and complete copies of all permits issued and permit applications submitted for the Facility.

Answer:

The answers to request 12 are limited in scope to the period since September 19, 2012 when 4K has owned the property. The answers to request 12 are also limited in scope so as not to repeat responses already given hereinabove to preceding requests. To the extent permit applications were submitted and/or permits were issued for the Facility prior to September 19, 2012, both USEPA and Ohio EPA are reasonably believed to be in possession of all such documents being requested. Subject to the foregoing limitations, after a reasonable and diligent search of all available records, Mull Group and 4K were unable to identify any of documents the requested

13. Provide in their entirety true, accurate, and complete copies of all reports, information, or data in your possession, custody or control related to soil, groundwater, surface water, air quality, and geology/hydrogeology at and about the Facility. Provide true, accurate, and complete copies of all such documents containing such data and information, as well as documents containing analysis or interpretation of such data. Include any information related to any public or private groundwater wells within a three-mile radius of the Facility, and all geologic cross sections and potentiometric groundwater elevation and flow direction maps available.

Answer:

After a reasonable and diligent search of all available records, Mull Group and 4K were able to locate a Phase I assessment dated April 20, 2010 prepared for Severstal Wheeling, Inc. and various groundwater testing logs (and associated materials) from 2015. The groundwater logs were previously provided to Ohio EPA. The referenced Phase I and groundwater testing logs are attached hereto as Appendix F.

14. Provide true, accurate, and complete copies of all documents in your possession, custody or control concerning any hazardous waste inspections, evaluations, safety audits, or site-visits at the Facility, and any other documents associated with the conditions, practices, and/or procedures at the Facility, including but not limited to all narrative reports, field notes, checklists, sampling records, laboratory analytical reports and data, and correspondence (e-mails, letters, text messages, etc.) relating to any such inspections, evaluations, safety audits, or site visits.

Answer:

After a reasonable and diligent search of all available records, Mull Group and 4K were unable to locate any documents that would be responsive to this request.

15. Describe all plans or pending plans to investigate the soil, water (ground or surface), geology, hydrology, or air quality on or about the Facility. For each plan identify:
- The nature and scope of these investigations;
 - The contractors or other persons that will undertake these investigations;
 - The purpose of the investigations;
 - The dates when such investigations will take place and be completed; and
 - The locations where on or about the facility the investigations will take place.

Answer:

- Not applicable.*
- Not applicable.*
- Not applicable.*

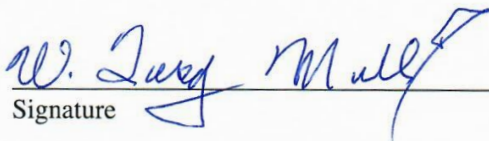
d. Not applicable.

e. Not applicable.

16. Provide the following certification by a responsible corporate officer:

I certify under the penalty of law that I have examined and am familiar with the information submitted and documents produced in response to an EPA Request for Information and that this response and all enclosures were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who managed the system, and those persons directly responsible for collecting and providing all relevant information and documents, I believe that the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Executed on March 11, 2022.


Signature

W. Quay Mull II, President
Mull Group, Inc.

Executed on March 11, 2022.


Signature

Joseph N. Gompers, Co-Manager/Member
4K Industrial Park LLC

Appendix A

Corporate Documents

BYLAWS
OF
WQM INDUSTRIES, INC.

ARTICLE I

The name of this corporation shall be WQM Industries, Inc.

ARTICLE II

The principal office of the corporation in West Virginia shall be at 90 North River Road, Wheeling, Ohio County.

The corporation may also have offices in such other places as the Board of Directors may, from time to time, designate.

ARTICLE III

The Corporate Seal shall be circular in form and mounted upon a metal die, suitable for impressing the same upon paper. About the upper periphery of the seal shall appear the words WQM Industries, Inc., and about the lower periphery of it, the words "West Virginia." In the center of the seal shall appear the words "Corporate Seal."

ARTICLE IV

Stockholders Meetings

Section 1. Annual Meeting. The annual meeting of the stockholders shall be held on such day as may be designated by the Board of Directors for the purpose of electing directors and for the transaction of such other business as may come before the meeting. If the day fixed for an annual

meeting shall be a legal holiday, such meeting shall be held on the next succeeding full business day.

Section 2. Special Meetings. Special meetings of the stockholders may be called by the President, the Board of Directors, or the holders of not less than fifty percent (50%) of all the shares entitled to vote at the meeting.

Section 3. Place of Meeting. Meetings of the stockholders shall be held at the principal office of the corporation in Wheeling, West Virginia, or at such other place as may be designated by the Board of Directors.

Section 4. Notice of Meetings. Written notice stating the place, day, and hour of the meeting and, in case of a special meeting, the purpose or purposes for which the meeting is called, shall be delivered not less than ten (10) nor more than fifty (50) days prior to the date of the meeting, either personally or by mail, to each shareholder of record. Waiver by a shareholder in writing of a notice of a shareholders meeting shall be equivalent to the giving of such notice. Attendance by a shareholder, without objection to the notice, whether in person or by proxy, at a shareholders meeting shall constitute waiver of notice of the meeting.

Section 5. Quorum. Except as hereinafter provided and as otherwise provided by law, at any meeting of the stockholders, fifty-one percent (51%) of all of the capital stock issued and outstanding, represented by stockholders of record in person, or by proxy, shall constitute a quorum. If, however, such majority shall not be represented at any meeting of the stockholders, legally called, the holders

of a majority of the shares present, represented and entitled to vote at the meeting, shall have power to adjourn the meeting to another time, or to another time and place, without notice other than announcement of adjournments for like cause in like manner until the requisite amount of shares entitled to vote at such meeting shall be represented. When a quorum is present at any meeting, a majority of the stock represented at the meeting shall decide any question brought before such meeting unless the question is one upon which, by express provision of law or of the Articles of Incorporation, or of these Bylaws, a larger vote is required, in which case such express provision shall govern and control the decision of such question.

Section 6. Proxies. At all meetings of stockholders, a stockholder may vote by proxy executed in writing by the stockholder or a duly authorized attorney-in-fact. No proxy shall be valid which shall have been granted more than sixty (60) days before the meeting named therein, and such proxy shall not be valid after the final adjournment of such meeting.

Section 7. Voting of Shares. Every stockholder of record at the closing of the transfer books, on the date established by the Board of Directors as the record date for determination of stockholders entitled to vote at such meeting, shall have the right, at every stockholders' meeting, to one (1) vote for each share of capital stock standing in his name on the books of the company. No share which belongs to the company shall be voted at any meeting.

Votes may be cast in person or by written, authorized proxy.

Section 8. Organization. At every meeting of the stockholders, the President, or in his absence, a chairman chosen by a majority of the stockholders, shall preside. The Secretary of the Corporation shall act as secretary of meetings of stockholders, and in his absence, the Chairman of the meeting may appoint any person to act as secretary of the meeting.

ARTICLE V

Board of Directors

Section 1. General Powers, Numbers, Tenure and Qualifications. The property and business of the Company shall be managed by the Board of not less than three Directors who need not be residents of the State of West Virginia or shareholders of the company; provided however, that if there are less than three shareholders, all of those shareholders shall constitute the Board of Directors. Each Director shall be elected for a term of one (1) year and shall hold office until a successor is elected and qualified.

Section 2. Regular Meetings. The organizational meeting of the Board of Directors shall be the first meeting following its election and shall be held, without notice, immediately following the Annual Meeting of Stockholders, or within ten (10) days thereafter upon notice in the manner provided by these Bylaws for calling meeting of the Board, for the purpose of election of officers, and consideration of any other business that may properly be brought before the meeting. Additional regular meetings may be held at such time as the Board may designate.

Section 3. Special Meetings. Special meetings of the Board of Directors may be called by the President, or in his absence or incapacity, or if such office be vacant, by the Secretary. The President shall call special meetings of the Board when requested to do so by a majority of the Board of Directors.

Section 4. Notice of Meetings. Notice of any meeting of the Board of Directors, other than the organizational meeting when held immediately after the adjournment of the Annual Stockholders' Meeting, shall be served, not less than three (3) days before the date fixed for such meeting, by oral, telegraphic, or written communication, stating the time and place thereof and, if by mail or telegraph, addressed to each member of the Board of Directors at his address as it appears on the books of the company. Any director may waive notice of any meeting. The attendance of a director at any meeting shall constitute a waiver of notice of such meeting, except when a director attends a meeting for the express purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened.

Section 5. Quorum. The entire Board of Directors shall be necessary to constitute a quorum for the transaction of any business, but if less than such majority is present at a meeting, a majority of the Directors present may adjourn the meeting from time to time without further notice. The act

of the majority of the Directors present at a meeting at which a quorum is present shall be the act of the Board of Directors unless the act of a greater number is required by statute, the Articles of Incorporation, or the Bylaws.

Section 6. Action Without a Meeting. Any action which may be taken by the Board of Directors may be taken without a meeting if consent in writing, setting forth the action to be taken, shall be signed by all of the Directors.

Section 7. Vacancies. Any vacancy occurring in the Board of Directors may be filled by the affirmative vote of a majority of the remaining directors though less than a quorum of the Board of Directors. A Director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office.

Section 8. Removal of Directors. Any one or more of the Directors may be removed, either with or without cause, at any time by a vote of the shareholders holding a majority of the shares, at any Special Meeting called for that purpose.

ARTICLE VI

Officers

Section 1. Number. Officers of the corporation shall be that of President, Secretary, Treasurer, and such other officers as may from time to time be elected or appointed by the Board of Directors. Any two or more offices may be

held by the same person, except that the duties of the President and Secretary shall not be performed by the same person.

Section 2. Election, Term of Office and Compensation.

The officers of the Company shall be elected annually by the Board of Directors at the organizational meeting of the Board. Each of the officers shall serve at the pleasure of the Board of Directors for such compensation as may be fixed by the Board. Additional officers may be elected at any regular or special meeting to serve until the next succeeding organizational meeting.

Section 3. Removal. Any officers elected by the Board of Directors may be removed by the Board of Directors whenever, in its judgment, the best interest of the Company would be served thereby.

Section 4. Vacancies. Any vacancy in any office may be filled for the unexpired portion of the term by the Board of Directors at any regular or special meeting.

Section 5. President. Subject to the Board of Directors, the President shall be the chief executive officer of the Corporation, and shall perform such other duties as may be prescribed by the Board of Directors.

Section 6. Secretary. The Secretary shall:

(a) Keep the minutes of the stockholders' and the Board of Directors' meetings in one or more books provided for the purpose;

(b) See that all notices are duly given in accordance with the provisions of these Bylaws or as required by law;

(c) Be custodian of the seal of the corporation and see that the seal of the corporation is affixed to all documents, the execution of which on behalf of the corporation under its seal is duly authorized;

(d) Sign with the President certificates of stock;

(e) In general, perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned to him by the President or the Board of Directors.

Section 7. Treasurer. The Treasurer shall:

(a) Have the custody of the corporate funds and securities;

(b) Deposit all monies that may come into his hand to the credit of the company in such depositories as are authorized or approved by the Board of Directors;

(c) See that all expenditures are duly authorized and evidenced by proper receipts and vouchers;

(d) Give such bond as may be required by the Board of Directors, subject to the approval of the Board;

(e) In general, perform all duties incident to the office of Treasurer and

such other duties as from time to time may be assigned to him by the President, or the Board of Directors.

ARTICLE VII

Stock Certificates, Transfer of Shares, Stock Records

Section 1. Certificates for Shares. Certificates representing shares of the Company shall be in such form, not inconsistent with the laws of the State of West Virginia, as shall be determined by the Board of Directors. Such certificates shall be signed by the President and by the Secretary. All certificates for shares shall be consecutively numbered or otherwise identified. The name and address of the person to whom the shares represented thereby are issued, with the number of shares and date of issue, shall be entered on the stock transfer records of the Company. All certificates surrendered to the Company for transfer shall be cancelled and no new certificates shall be issued until the former certificates for a like number of shares shall have been surrendered and cancelled.

Section 2. Transfer of Shares. Shares of stock of the corporation may be transferred by the holder thereof, by his attorney legally constituted, or by his proper legal representative, by endorsement on the certificate, or by properly executed stock power of attorney, but no transfer shall be valid until surrender of the previous certificate and the transfer thereof on the books of the Corporation.

Section 3. Lost Certificate. Any person claiming a certificate of stock to have been lost, stolen, or destroy-

ed, and desiring a new certificate in lieu thereof, shall make an affidavit of such fact, reciting the circumstances attending such loss or destruction, and shall give the Company an open penalty bond or indemnity, with a surety company thereon, satisfactory to the President or Treasurer of the company (excepting that the Board of Directors may, by resolution, authorize the acceptance of a bond of definite amount, or a bond with personal surety thereon), whereupon, in the discretion of the President or Treasurer, a new certificate may be issued of the same tenor and for the same number of shares as the one alleged to have been lost, stolen, or destroyed.

Section 4. Determination of Record Date. The Board of Directors shall fix in advance a date, not exceeding sixty (60) days preceding the date of any meeting of stockholders, or the date for payment of any dividend, or the date for the allotment of rights, or the date when any change or conversion or exchange of stock shall go into effect, as a record date for the determination of the stockholders entitled to notice of, and to vote at, any such meeting, or entitled to receive payment of any such dividend, or to any such allotment of rights, or to exercise the rights in respect to any such change, conversion or exchange of stock, and in such case, only such shareholders as shall be stockholders of record on the date so fixed shall be entitled to such notice of and to vote at such meeting, or to receive payment of such dividend, or to receive such allotment of rights, or to exercise such rights, as the case may be,

notwithstanding any transfer of stock on the books of the Company after any such date fixed as aforesaid.

ARTICLE VIII

Indemnification

Section 1. Payment of Dividends. The Board of Directors at any regular or special meeting may declare dividends payable from the surplus of the Corporation. Such dividends may be paid in cash, property, or shares of the Corporation. The unanimous approval of the Board of Directors shall be required for the adoption of a resolution regarding the payment of any dividend.

Section 2. Checks. All checks or demands for money and notes of the Corporation shall be signed by such officer or officers, or such other person or persons, as the Board of Directors, from time to time, may designate.

ARTICLE IX

Amendments

These Bylaws may be amended at any regular or special meeting of the Board of Directors, by the vote of the majority of the total number of directors. The Bylaws may contain any provisions for the regulation and management of the affairs of the Corporation not prohibited by law or the Articles of Incorporation.

WQM INDUSTRIES, INC.
WAIVER OF NOTICE OF ORGANIZATIONAL MEETING
OF THE INCORPORATOR

March 30, 1981

The undersigned being the Incorporator of WQM Industries, Inc., hereby Waives Notice of the Organizational Meeting of the Incorporator to be held in the offices of Phillips, Gardill, Hazlett & Kaiser, 61 Fourteenth Street, Wheeling, West Virginia, on March 30, 1981, at 4:00 p.m. for the following purposes:

- (1) to complete the organization of the corporation;
- (2) to approve Bylaws;
- (3) to nominate and elect directors; and
- (4) to transact such other business as may come before the meeting.

DATED this ____ day of March, 1981.

W. QUAY MULL, II

WQM INDUSTRIES, INC.
MINUTES OF THE ORGANIZATIONAL MEETING OF THE INCORPORATOR

March 30, 1981

The Organizational Meeting of the Incorporator of WQM Industries, Inc. was held in the offices of Phillips, Gardill, Hazlett & Kaiser, 61 Fourteenth Street, Wheeling, West Virginia, on March 30, 1981, at 4:00 p.m. pursuant to a Waiver of Notice signed by the Incorporator.

Present was W. Quay Mull, II, being the Incorporator and initial director as named in the Articles of Incorporation. Also present by invitation of the Incorporator were Joseph N. Gompers, accountant for the corporation, and Charles J. Kaiser, Jr., attorney for the corporation.

Upon Motion duly made, seconded, and carried unanimously, W. Quay Mull, II, was named Chairman of the meeting and Charles J. Kaiser, Jr., served as Secretary pro tem.

The Chairman then reported that the Certificate of Incorporation was issued from the office of the Secretary of State of West Virginia under date the 13th day of February, 1981, and the Secretary was instructed to cause a copy of such Certificate of Incorporation to be inserted in the Minute Book immediately following the Minutes of this meeting.

The Secretary then presented a form of Bylaws for the regulation of the affairs of the corporation, which Bylaws were read section by section. Upon Motion duly made, seconded, and carried unanimously, it was

RESOLVED, that the Bylaws submitted and read at this meeting be, and the same hereby are, adopted as and for the Bylaws of this corporation, and that the secretary be, and he hereby is, instructed to cause the same to be inserted in the Minute Book, immediately following the copy of the Certificate of Incorporation.

There was then a discussion regarding the feasibility of complying with the provisions of § 1244 of the Internal Revenue Code so that the corporation's capital stock (par value \$10.00 per share) would qualify as "§ 1244" Small Business Stock, thus permitting persons who purchase such stock to obtain an ordinary loss deduction in the event that they subsequently sell their stock at a loss or their stock becomes worthless. Upon Motion duly made, seconded, and carried unanimously, it was

RESOLVED, that the following "Plan to Issue
§ 1244 Stock" be and hereby is adopted:

PLAN TO ISSUE § 1244 STOCK

1. Any outstanding portion of any prior offering of stock is hereby withdrawn.
2. Five Hundred (500) shares of the corporation's stock (par value \$10.00 per share) are to be offered pursuant to and during the term of this Plan at a price of not less than \$10.00 per share (the "capital stock").
3. The corporation agrees with each person who purchases capital stock that it will conduct its business and affairs in a manner which will qualify the capital stock under § 1244 of the Internal Revenue Code and the regulations issued thereunder so long as any capital stock is registered in the name of an original purchaser.
4. The term of this Plan shall begin when the Plan is adopted by the Board of Directors and shall continue until all 500 shares of capital stock pursuant to this Plan have been issued, but not longer than two (2) years after this Plan is adopted.
5. During the term of this Plan no other equity securities or securities convertible into equity securities shall be offered or issued by the corporation.
6. The maximum amount to be received by the corporation in consideration of the issuance of the capital stock shall be \$100,000.00.
7. The officers of the corporation acting under the direction of the President are authorized and directed to do all things any of them deem necessary to carry out the terms of this Plan and to issue certificates for fully paid shares of capital stock upon receipt of the consideration in cash.

Thereupon, it was determined that election of a Board of Directors was in order, and W. Quay Mull, II, having been duly nominated and having received a majority of all votes cast, was duly declared as director of this company for one (1) year, or until his successor as such shall be elected.

On Motion, the Minutes of this meeting were read and approved, and thereupon, the meeting of the Incorporator adjourned.

CHAIRMAN


SECRETARY

WQM INDUSTRIES, INC.
WAIVER OF NOTICE OF THE FIRST MEETING OF THE BOARD OF DIRECTORS

March 30, 1981

The undersigned, being the director of WQM Industries, Inc., hereby Waives Notice of a Meeting of the Board of Directors of such corporation to be held in the office of Phillips, Gardill, Hazlett & Kaiser, 61 Fourteenth Street, Wheeling, West Virginia, on March 30, 1981, at 4:30 p.m.

DATED this ____ day of March, 1981.

W. QUAY MULL, II

WQM INDUSTRIES, INC.
MINUTES OF THE MEETING OF THE BOARD OF DIRECTORS

March 30, 1981

A meeting of the Board of Directors of WQM Industries, Inc., was held in the offices of Phillips, Gardill, Hazlett & Kaiser, 61 Fourteenth Street, Wheeling, West Virginia, on the 30th day of March, 1981, at 4:30 p.m. pursuant to a Waiver of Notice signed by all directors.

Present was W. Quay Mull, II, the only director of the corporation. Also present by invitation of the Board were Joseph N. Gompers, accountant for the corporation and Charles J. Kaiser, Jr., attorney for the corporation.

Upon motion duly made, seconded, and carried unanimously, W. Quay Mull, II, was chosen Chairman of the meeting and Charles J. Kaiser, Jr., served as Secretary of the meeting.

The Minutes of the Organizational Meeting of the Incorporator were read and approved.

Mr. Kaiser then presented for inspection a form of stock certificate for the common stock to be issued by the corporation and after discussion and upon motion duly made, seconded, and unanimously carried, it was

RESOLVED, that the form of stock certificate presented before this meeting be approved and adopted, and that the Secretary be instructed to insert a specimen copy thereof in the Minute Book following the Minutes of this meeting.

Upon motion duly made, seconded, and unanimously carried, it was

RESOLVED, that the seal, an impression of which is herewith affixed, be adopted as the corporate seal of the corporation.

Thereupon, it was determined that an election of officers for the corporation was in order. The following persons were nominated for offices of the corporation to serve until their respective successors are chosen and qualified:

President
Secretary-Treasurer

W. Quay Mull, II
Roger B. Corder

Ballot having been duly had the Chairman announced that the foregoing persons have been unanimously elected to the offices set before their respective names.

The President then reviewed with the directors the Plan to Issue \$ 1244 Stock as adopted at the meeting of the Incorporator. After discussion, and upon motion duly made, seconded, and carried unanimously, it was

RESOLVED, that the Plan to Issue \$ 1244 Stock as adopted at the meeting of the Incorporator, is hereby ratified and approved, and the President is authorized to issue the corporation's common stock upon receipt of cash pursuant to the terms of that Plan.

Thereupon, the director discussed the financial affairs of the corporation and upon motion duly made, seconded, and carried unanimously, it was

RESOLVED, that Belmont County National Bank, of St. Clairsville, Ohio, be and hereby is designated as the primary depository of the funds of the corporation, and that the officers of the corporation be, and they hereby are, instructed to open an account or accounts with said depository.

FURTHER RESOLVED, that all monies deposited in the name of and to the credit of the corporation, may be withdrawn upon the check, draft, or order of the corporation signed by W. Quay Mull, II, President.

FURTHER RESOLVED, that the officers are hereby empowered and authorized to execute any bank resolution which may be required by Belmont County National Bank for the purpose of opening the corporation's bank accounts. The Secretary shall place a copy of any bank resolutions executed pursuant to this corporate resolution in the Minute Book.

The President then indicated that it was currently discussing the possibility of acquiring all of the outstanding stock of Mull Machine Company from William Q. Mull and Marie F. Mull. After discussion, and upon motion duly made, seconded, and unanimously carried, it was

RESOLVED, that the corporation is hereby authorized to negotiate the purchase of all of the outstanding stock of Mull Machine Company upon such terms and conditions as may be appropriate; and that the corporation hereby authorizes and empowers its President, W. Quay Mull, II, with assistance from its accountant, Joseph N. Gompers, and its attorney, Charles J. Kaiser, Jr., to take the action appropriate and prepare the necessary documents to carry out the purchase as contemplated.

There being nothing further to come before the meeting, it was adjourned at 5:15 p.m.

CHAIRMAN



SECRETARY

WQM INDUSTRIES, INC.
MINUTES OF A MEETING OF THE BOARD OF DIRECTORS

July 23, 1981

A meeting of the Board of Directors of WQM Industries, Inc., was held in the offices of Phillips, Gardill, Hazlett & Kaiser, 61 Fourteenth Street, Wheeling, West Virginia, on the 23rd day of July, 1981, at 8:30 a.m.

Present were W. Quay Mull, II, being the only director of the corporation. Also present by invitation of the Board were Joseph N. Gompers, accountant for the corporation, and Charles J. Kaiser, Jr., attorney for the corporation.

Upon motion duly made, seconded and carried unanimously, W. Quay Mull, II, was chosen Chairman of the meeting and Charles J. Kaiser, Jr., served as Secretary pro tem.

The Minutes of the meeting of the Board of Directors on March 30, 1981, were read and approved.

The Chairman then presented a proposed Stock Purchase Agreement whereby Marie F. Mull and William Q. Mull would sell all of the outstanding stock of Mull Machine Company owned by them to WQM Industries, Inc. After a discussion of the terms and the conditions of the Stock Purchase Agreement and upon motion duly made, seconded, and carried unanimously it was

RESOLVED, that the officers of this corporation being W. Quay Mull, II, President, and Roger B. Corder, Secretary-Treasurer, are hereby authorized to purchase on behalf of the corporation five hundred seventy-nine (579) shares of the capital stock of Mull Machine Company standing in the names of William Q. Mull and Marie F. Mull.

FURTHER RESOLVED, that the aforesaid officers are hereby authorized and empowered to execute, acknowledge, and deliver on behalf of WQM Industries, Inc., all agreements, documents of title, and loan agreements necessary to consummate the aforesaid purchase, including but not by way of limitation, a Stock Purchase Agreement, Promissory Notes, Deeds of Trust, Security Agreements, and an Escrow Agreement.

FURTHER RESOLVED, that the aforesaid officers are hereby authorized and empowered to procure an irrevocable letter of credit in the amount of Four Hundred Thousand Dollars (\$400,000.00) as

security for the payment of the debt to be incurred to William Q. and Marie F. Mull and to execute all documents, loan agreements, and deeds of trust necessary to secure this irrevocable letter of credit.

There being nothing further to come before the meeting, it was adjourned at 9:05 a.m.

CHAIRMAN


SECRETARY

EXCERPTS FROM THE MINUTES OF THE
BOARD OF DIRECTORS MEETING OF
MULL MACHINE COMPANY ON
October 1, 1981

The Chairman then opened discussion concerning the need to establish a borrowing arrangement between Mull Machine Company and WQM Industries, Inc. WQM Industries, Inc., now being the parent of Mull Machine Company and it being deemed advisable by the officers and directors of both companies to provide for loans from Mull Machine Company to WQM Industries, Inc., from time to time as needed by WQM Industries, Inc. to purchase assets for and on behalf of Mull Machine Company and for its other general corporate purposes. After motion duly made, seconded, and carried unanimously, it was

RESOLVED, that Mull Machine Company is hereby authorized and empowered to loan to WQM Industries, Inc. a sum not to exceed Two Million Dollars (\$2,000,000.00) at any one time outstanding, as may be needed or required by WQM Industries, Inc.

FURTHER RESOLVED, that the loan is to be without interest but shall, nevertheless, be a legal and binding obligation on the part of WQM Industries, Inc.

FURTHER RESOLVED, that WQM Industries, Inc. shall execute a promissory note payable on demand for the full amount authorized hereunder and that the certified public accountant employed by Mull Machine Company shall maintain on the books and records of Mull Machine Company and WQM Industries, Inc. the exact amount of the indebtedness at all times outstanding pursuant to this Agreement.

PROMISSORY NOTE

\$2,000,000.00

Wheeling, West Virginia
October 1, 1981

On demand at any time hereafter WQM INDUSTRIES, INC., a West Virginia Corporation promises to pay to the order of MULL MACHINE COMPANY, a West Virginia Corporation, both having their principal office located at 90 North River Road, Wheeling, West Virginia, the sum of Two Million Dollars (\$2,000,000.00) or such lesser sum as may be due and outstanding on the date of demand.

The maker hereby waives presentment, notice of dishonor, and any and all other notices and demands in connection with the default or enforcement of this Note.

WQM INDUSTRIES, INC.

(Corporate Seal)

By _____
Its President

State of West Virginia



Certificate

*I, Betty Ireland, Secretary of State of the
State of West Virginia, hereby certify that*

Articles of Amendment to the Articles of Incorporation of

WQM INDUSTRIES, INC.

Are filed in my office as required by the provisions of the West Virginia Code and are found to conform to law. Therefore, I issue this.

CERTIFICATE OF AMENDMENT TO THE ARTICLES OF INCORPORATION

changing the name of the corporation to

MULL GROUP, INC.



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
January 3, 2006*

Betty Ireland

Secretary of State

**ARTICLES OF AMENDMENT TO THE
ARTICLES OF INCORPORATION
of
WQM INDUSTRIES, INC.**

Pursuant to the provisions of the West Virginia Business Corporation Act (West Virginia Code § 31D-10-1003), the undersigned corporation adopts the following Articles of Amendment to its Articles of Incorporation:

FIRST: The present name of the corporation is WQM Industries, Inc.

SECOND: The following amendment to the Articles of Incorporation was adopted by the shareholders of the corporation on the 19th. day of December, 2005, in the manner prescribed by the West Virginia Business Corporation Act:

1. Article I of the Articles of Incorporation shall be amended by striking that Article completely and providing in lieu thereof:

ARTICLE I. NAME. The name of the corporation is MULL GROUP, INC.

THIRD: The number of shares outstanding at the time of the adoption was one hundred (100) shares of common stock. The corporation has no other outstanding stock. The number of shares voting for the amendment was one hundred (100) shares, and the number of shares voting against the amendment was no shares.

FOURTH: The foregoing amendments do not affect a change in the stated capital of the corporation and do not provide for an exchange, reclassification, or cancellation of issued shares.

DATED this 29 day of December, 2005.

(CORPORATE SEAL)

WQM INDUSTRIES, INC.,
a West Virginia corporation,

By 
Its President

FILED
JAN 03 2006

IN THE OFFICE OF
~~SECRETARY OF STATE~~
SECRETARY OF STATE

STATE OF WEST VIRGINIA,

COUNTY OF OHIO, TO-WIT:

I, SHARON L. SKILLING, a Notary Public of said County and State do
certify that W. Quay Mull, II, who signed the writing above as President of WQM INDUSTRIES,
INC., a corporation, have this day before me in my said County acknowledged the writing to be
the act and deed of said corporation.

Given under my hand this 29 day of December, 2005.


Notary Public

My commission expires:

FEB. 25, 2013



This instrument was prepared by Charles J. Kaiser, Jr., PHILLIPS, GARDILL, KAISER &
ALTMAYER, 61 Fourteenth Street, Wheeling, West Virginia 26003.



*I, A. James Manchin, Secretary of State of the
State of West Virginia, hereby certify that*

pursuant to the provisions of Section 28, Article 1, Chapter 31 of
the Code of West Virginia, 1931, as amended, duplicate originals
of Articles of Incorporation of

WQM INDUSTRIES, INC.,

have been received and are found to conform to law, and declared
to be from this date a Corporation by the name and for the purposes
as set forth in the said Articles, with the right of perpetual existence.

ACCORDINGLY, I hereby issue this Certificate of Incorporation.

*Given under my hand and the
Great Seal of the said State at
the City of Charleston, this*

THIRTEENTH

day of

FEBRUARY,

19 81

A. James Manchin
Secretary of State.



ARTICLES OF INCORPORATION
OF
WQM INDUSTRIES, INC.

FILED IN THE OFFICE OF
SECRETARY OF STATE OF
WEST VIRGINIA
FEB 13 1981
THIS DATE

The undersigned natural person acting as the incorporator of a corporation under the provisions of the West Virginia Corporations Act, as amended, hereby adopts the following Articles of Incorporation:

ARTICLE I, NAME. The name of the corporation is WQM Industries, Inc..

ARTICLE II, DURATION. The period of duration of the corporation shall be perpetual.

ARTICLE III, PURPOSES. (a) To do and transact any and all lawful business for which corporations may be incorporated under the provisions of the West Virginia Corporations Act (W.Va. Code Chapter 31, Article 1, as amended).

(b) To do everything necessary, proper, advisable or convenient for the accomplishment of the foregoing purposes, and to do all other things incidental to them or connected with them that are not forbidden by the West Virginia Corporations Act, by any other law, or by these Articles of Incorporation.

ARTICLE IV, STOCK. The aggregate number of shares which the corporation shall have the authority to issue is Five Hundred (500) shares of the par value of Ten Dollars (\$10.00), per share.

ARTICLE V, PRINCIPAL OFFICE. The initial principal office of the corporation shall be in Wheeling, Ohio County, West Virginia, and its mailing address shall be 90 North River Road, Wheeling, West Virginia, 26003. W. Quay Mull II, is hereby authorized by the corporation to receive service of process on behalf of the corporation.

ARTICLE VI, DIRECTOR. The initial Board of Directors shall consist of one (1) member who need not be a resident of the State of West Virginia. The name and address of the person who is to serve as Director until the first annual meeting of shareholders and until a Board of Directors shall have been elected and qualified is:

<u>NAME</u>	<u>ADDRESS</u>
W. Quay Mull II	302 Johnnet Drive St. Clairsville, OH 43950

ARTICLE VII, PREEMPTIVE RIGHT. The holders of common shares shall be entitled to purchase ratably according to their respective holdings, any common shares of the corporation issued or sold for cash and any purchase warrants or option rights which may be issued giving the right to purchase such common shares for cash.

ARTICLE VIII, INCORPORATOR. The name and address of the incorporator of this corporation is: W. Quay Mull, II, 302 Johnnet Drive, St. Clairsville, OH, 43950.

EXECUTED this 30th day of January, 1981.

W. Quay Mull II
W. QUAY MULL II

STATE OF WEST VIRGINIA,

COUNTY OF OHIO, TO-WIT:

I, Charles J. Kaiser Jr., a Notary Public of said County and State, do certify that on this day, W. Quay Mull II, personally appeared before me and, being duly sworn, declared that he is the Incorporator referred to above and that he signed these Articles of Incorporation as such and that all of the statements contained therein are true.

Given under my hand this 30th day of January, 1981.

Charles J. Kaiser Jr.
Notary Public

My commission expires:

September 24, 1985

This instrument was prepared by Charles J. Kaiser, Jr., PHILLIPS, GARDILL, HAZLETT & KAISER, 61 Fourteenth Street, Wheeling, WV 26003.

Appendix B

Ohio Department of Natural Resources Authorizations



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

June 11, 2013

TERRY DUSZ
4K INDUSTRIAL PARK
1001 MAIN STREET
MARTINS FERRY, OH 43935

Facility Name: 4 K INDUSTRIAL PARK LLC

Dear Water Withdrawer:

The Ohio Water Withdrawal Facility Registration form for the above-referenced facility has been reviewed and accepted

Please record and retain the **Registration Number 02611**. Also, please refer to the registration number in any correspondence or other communication regarding this facility under this program.

In December of each year you will be sent an annual report form to complete and return to the Division of Water by March 1st of the following year. The data you will provide will pertain to the previous years water withdrawals. If you do not already keep monthly totals (in millions of gallons) of water withdrawals, please start to do so at this time as we will be asking for this information annually.

Your cooperation in providing the required information in a timely manner is appreciated. If you have any questions or need further information, please contact Mike Hallfrisch at (614) 265-6745 or by e-mail at mike.hallfrisch@dnr.state.oh.us.

Sincerely,

A handwritten signature in cursive script that reads "Blaine Gerdes".

Blaine Gerdes
Division of Soil and Water Resources



STATE OF OHIO WATER WITHDRAWAL FACILITY REGISTRATION

SEND TO: OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF SOIL and WATER RESOURCES
WATER RESOURCES SECTION
2045 MORSE ROAD, BLDG. B-3
COLUMBUS, OHIO 43229-6693
614-265-6739

AUTHORITY: Ohio Revised Code Section 1521.16 requires that any owner of a facility, or combination of facilities, with the capacity to withdraw more than 100,000 gallons of water daily, register such facilities with the Ohio Department of Natural Resources, Division of Soil and Water Resources.

100,000 Gallons Per Day (GPD) = 0.1 Million Gallons Per Day (MGD) = 4200 Gallons Per Hour (GPH) = 70 Gallons Per Minute (GPM)

Detailed directions are on a separate instruction sheet. Please type or print the following information:

1. OWNER OF WATER WITHDRAWAL FACILITY

Owner's Name <u>W. QUAY MULL</u>	Contact Person (If other than owner) <u>TERRY DUSZ</u>
Company Name <u>4K INDUSTRIAL PARK LLC</u>	Company Name <u>4K INDUSTRIAL PARK</u>
Mailing Address <u>1001 MAIN STREET</u>	Mailing Address <u>1001 MAIN STREET</u>
City, State, Zip <u>MARTINS FERRY, Ohio 43935</u>	City, State, Zip <u>MARTINS FERRY, Ohio 43935</u>
SIC (Standard Industrial Classification)-4 digit Phone <u>(304) 639-3166</u>	Phone <u>(304) 639-3166</u>
Owner's E-mail	Contact's E-mail <u>Terry.Dusz@arrowstrip.com</u>

The annual withdrawal report form should be sent to: ☐ Owner ☒ Contact person (Check one)

2. WATER USE

Estimate percentage of the total water use from all sources for each type of use for both ground water and surface water.
Total water use for both ground and surface water = 100%; GW = Ground water; SW = Surface water

WATER USE			WATER USE		
	GW%	SW%		GW%	SW%
Public Water Supply			Mineral Extraction		
Community			Coal		
Non-community			Oil & Gas (Hydraulic Fracturing)		100%
(OEPA # _____)			(Non Hydraulic Fracturing)		
Agricultural			Salt		
Livestock Watering			Sand and Gravel		
Crop Irrigation			Limestone		
Nursery/Turf/Landscaping			Other		
Industrial			(Please specify)		
Process Water			Miscellaneous		
Cooling Water			Recreation/Amusement		
Power Generation			Water Quality Remediation		
Nuclear			Heating/Cooling		
Thermoelectric			Domestic		
Hydroelectric			Fish Hatchery		
			Dewatering		
			Golf Course Irrigation		
			Other		
			(Please specify)		

3. WATER WITHDRAWAL FACILITY CAPACITY

Total withdrawal capacity of the facility: 3 GPD or MGD (Circle one)

NOTE: Total withdrawal capacity is the sum of the withdrawal capacity for all wells and surface water intakes combined.

Name of facility 4K INDUSTRIAL PARK LLC

4. SUPPLY SOURCES

GROUND-WATER SOURCES

Total number of wells _____
Total withdrawal capacity of all wells _____
GPD or MGD (Circle one)

SURFACE-WATER SOURCES

Total number of surface-water intakes 1
Total withdrawal capacity of all intakes 3
GPD or MGD (Circle one)

FOR EACH WELL
PROVIDE THE FOLLOWING:

A. Owner's well number _____
Well capacity _____ GPD or MGD (Circle one)
Well log number (or copy of well log) _____
Well depth _____ (ft) Well diameter _____ (in)

AQUIFER UTILIZED (Check one)

- ☐ Sand ☐ Shale (Sh)
☐ Sandstone (SS) ☐ Interbedded SS, LS, Sh
☐ Sand and gravel ☐ Underground mine
☐ Limestone (LS) / Dolomite ☐ Other _____

LOCATION OF WELL

County _____
Township _____ Section _____
Nearest City or Town _____
Provide written description of well location.

B. Owner's well number _____
Well capacity _____ GPD or MGD (Circle one)
Well log number (or copy of well log) _____
Well depth _____ (ft) Well diameter _____ (in)

AQUIFER UTILIZED (Check one)

- ☐ Sand ☐ Shale (Sh)
☐ Sandstone (SS) ☐ Interbedded SS, LS, Sh
☐ Sand and gravel ☐ Underground mine
☐ Limestone (LS) / Dolomite ☐ Other _____

LOCATION OF WELL

County _____
Township _____ Section _____
Nearest City or Town _____
Provide written description of well location.

C. Owner's well number _____
Well capacity _____ GPD or MGD (Circle one)
Well log number (or copy of well log) _____
Well depth _____ (ft) Well diameter _____ (in)

AQUIFER UTILIZED (Check one)

- ☐ Sand ☐ Shale (Sh)
☐ Sandstone (SS) ☐ Interbedded SS, LS, Sh
☐ Sand and gravel ☐ Underground mine
☐ Limestone (LS) / Dolomite ☐ Other _____

LOCATION OF WELL

County _____
Township _____ Section _____
Nearest City or Town _____
Provide written description of well location.

(Note: Use additional sheets if necessary)

FOR EACH SURFACE-WATER INTAKE
PROVIDE THE FOLLOWING:

A. Owner's intake number _____
Intake capacity _____ 3 GPD or MGD (Circle one)
Name of body of water CHIO RIVER

SOURCE UTILIZED (Check one)

- ☒ River, stream, or drainage ditch
☐ Lake, pond, quarry, or reservoir
☐ Other _____

LOCATION OF INTAKE

County BALTIMORE
Township PEASE Section _____
Nearest City or Town MARTINS FERRY
Provide written description of intake location.

EAST RIVER BANK JUST NORTH OF
SAID FACILITIES' OUTFALL FROM WASTE WATER
TREATMENT PLANT.

B. Owner's intake number _____
Intake capacity _____ GPD or MGD (Circle one)
Name of body of water _____

SOURCE UTILIZED (Check one)

- ☐ River, stream, or drainage ditch
☐ Lake, pond, quarry, or reservoir
☐ Other _____

LOCATION OF INTAKE

County _____
Township _____ Section _____
Nearest City or Town _____
Provide written description of intake location.

C. Owner's intake number _____
Intake capacity _____ GPD or MGD (Circle one)
Name of body of water _____

SOURCE UTILIZED (Check one)

- ☐ River, stream, or drainage ditch
☐ Lake, pond, quarry, or reservoir
☐ Other _____

LOCATION OF INTAKE

County _____
Township _____ Section _____
Nearest City or Town _____
Provide written description of intake location.

(Note: Use additional sheets if necessary)

Supply Sources Contained:

D. Owner's well number _____
Well capacity _____ GPD or MGD (Circle one)
Well log number (or copy of well log) _____
Well depth _____ (ft) Well diameter _____ (in)

AQUIFER UTILIZED (Check one)

- | | |
|--|---|
| <input type="checkbox"/> Sand | <input type="checkbox"/> Shale (Sh) |
| <input type="checkbox"/> Sandstone (SS) | <input type="checkbox"/> Interbedded SS, LS, Sh |
| <input type="checkbox"/> Sand and gravel | <input type="checkbox"/> Underground mine |
| <input type="checkbox"/> Limestone (LS) / Dolomite | <input type="checkbox"/> Other _____ |

LOCATION OF WELL

County _____
Township _____ Section _____
Nearest City or Town _____
Provide written description of well location.

D. Owner's intake number _____
Intake capacity _____ GPD or MGD (Circle one)
Name of body of water _____

SOURCE UTILIZED (Check one)

- | |
|---|
| <input type="checkbox"/> River, stream, or drainage ditch |
| <input type="checkbox"/> Lake, pond, quarry, or reservoir |
| <input type="checkbox"/> Other _____ |

LOCATION OF INTAKE

County _____
Township _____ Section _____
Nearest City or Town _____
Provide written description of intake location.

5. LOCATION OF WATER USE

State Ohio County Baldwin Township _____ Section _____
Provide written description of location of water use. If more than one water use location exists, attach separate sheets providing the above information for each.

6. TYPE AND LOCATION OF DISCHARGE POINTS

Estimate percentage of water discharged to the following:

- | | | |
|--|---|--|
| <input type="checkbox"/> Recharge Well | <input type="checkbox"/> Land Application | <input type="checkbox"/> Pond, Lake, or Reservoir Name _____ |
| <input type="checkbox"/> On Site Sewage Disposal | <input type="checkbox"/> Recycling Basin | <input type="checkbox"/> River, Stream, or Drainage Ditch Name _____ |
| <input type="checkbox"/> Ground-water Recharge Basin | <input type="checkbox"/> Wetland | <input type="checkbox"/> Other _____
(Please specify) |

Location of Discharge Facility

State _____ County _____ Township _____ Section _____

Provide written description of location of discharge facility. If more than one point of discharge exists, attach separate sheets providing the above information for each.

Please complete a water withdrawal facility location sketch on page 4.

7. STATEMENT OF AFFIRMATION

I hereby certify that to the best of my knowledge the information submitted herein, is true, accurate and complete.

X Terry D. King V.P. Steel Processing
Owner or authorized representative's signature

Date

6-4-13



Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

Richard J. Simmers, Chief
Division of Oil and Gas Resources Management
2045 Morse Road - Bldg. F-2
Columbus, OH 43229-6693
Phone: (614) 265-6922, Fax: (614) 265-6910

ORDER BY THE CHIEF

January 3, 2014

ORDER NO. 2014-01

TO: 4K Industrial Park, LLC
1001 Main Street
Martins Ferry, Ohio 43935

RE: 4K Industrial Park Facility

SUBJECT: Temporary Authorization to Operate Facility Pursuant to
R.C. 1509.22

Pursuant to Ohio Revised Code Section 1509.22, the Chief of the Division of Oil and Gas Resources Management ("Chief" or "Division") issues the following Order:

BACKGROUND:

- (1) 4K Industrial Park, LLC proposes to operate a brine water recycling and treatment facility in Martins Ferry, Belmont County, Ohio ("4K Martins Ferry Facility"). The 4K Martins Ferry Facility will utilize the waste treatment resources of the former RG Steel Martins Ferry Ohio Operation for use in recycling and treating hydraulic frac waters and drilling fluids. Treatment will be performed on site, and the water will be recycled back to drilling companies for reuse.
- (2) Division (B)(2)(a) of R.C. 1509.22 states, in pertinent part, that "On and after January 1, 2014, no person shall store, recycle, treat, process, or dispose of in this state brine or other waste substances associated with the exploration, development, well stimulation, production operations, or plugging of oil and gas resources without an order or a permit issued under this section or section 1509.06 or 1509.21 of the Revised Code or rules adopted under any of those sections."
- (3) On December 23, 2013, 4K Industrial Park, LLC submitted to the Division an application requesting to operate the 4K Martins Ferry Facility. In its application, 4K Industrial Park, LLC supplied the Division with information and details regarding its operations.

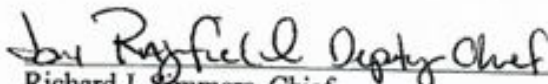
ORDER:

IT IS HEREBY ORDERED

4K Industrial Park, LLC has temporary approval to operate the 4K Martins Ferry Facility in the State of Ohio, subject to the following **conditions**:

- 1) 4K Industrial Park, LLC shall conduct all operations in compliance with R.C. Chapter 1509 and Ohio Adm.Code 1501:9.
- 2) Brine shall not be disposed of in a manner not specified in R.C. 1509.22(C)(1)(a) through R.C. 1509.22(C)(1)(c). Disposal pursuant to R.C. 1509.22(C)(1)(d) requires separate written approval by the Chief.
- 3) This Chief's Order shall terminate upon any of the following, whichever occurs first:
 - a) The Division issues a permit to 4K Industrial Park, LLC for the 4K Martins Ferry Facility pursuant to rules promulgated under to R.C. 1509.22(C);
 - b) The Division denies a permit to 4K Industrial Park, LLC for the 4K Martins Ferry Facility pursuant to rules promulgated under R.C. 1509.22(C); or
 - c) Six months after the effective date of rules adopted under R.C. 1509.22(C).

1/3/14
Date


Richard J. Simmers, Chief
Division of Oil and Gas Resources Management

Addressee is hereby notified that this action is final and effective and may be appealed pursuant to Section 1509.36 of the Ohio Revised Code. If the Order is appealed to the Ohio Oil and Gas Commission, the appeal must be in writing and must set forth the Orders complained of and the grounds upon which the appeal is based. Such appeal must be filed with the Oil and Gas Commission, 2045 Morse Road, Building H-3, Columbus, Ohio 43229-6693, within thirty (30) days after receipt of this Order.

In addition, within three (3) days after the appeal is filed with the Oil and Gas Commission, notice of the filing must be submitted to Richard J. Simmers, Chief, Division of Oil and Gas Resources Management, Ohio Department of Natural Resources, 2045 Morse Road, Building F, Columbus, Ohio 43229-6693.

CERTIFIED MAIL No:

91 7199 9991 7030 3103 6665

cc: Eric Vendel, Legal Counsel, DOGRM
Rocky King, Region Supervisor
Steve Opritza, Permitting Manager
Erica Freeman, Surety Section
Engineering Section
Andrew Corder, Belmont County Oil and Gas Inspector

Appendix C

December 2021 Hazardous Waste Manifests

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number 0110010448231		2. Page 1 of 1		3. Emergency Response Phone 504-658-3165		4. Manifest Tracking Number 023176389 JJK			
		5. Generator's Name and Mailing Address 4K Industrial Park P.O. BOX 37 Marble Ferry OH 43835 Generator's Phone: 304 273-3363						Generator's Site Address (if different than mailing address) 4K Industrial Park 1001 Main Street Marble Ferry OH 43835			
		6. Transporter 1 Company Name The PennOhio Corporation						U.S. EPA ID Number OHRC00023037			
		7. Transporter 2 Company Name						U.S. EPA ID Number			
		8. Designated Facility Name and Site Address Chemtron Corporation 35350 Schnelder Court Avon OH 44011 Facility's Phone: 440 357-6249						U.S. EPA ID Number OHDC60060803			
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
	X	HA1952, Combustible liquid, n.o.s., PGB (Naphtha Petroleum)				03 DM 105		6		NONE	
	2										
	3										
	4										
14. Special Handling Instructions and Additional Information 120211025-0.2 VMD 65753 ERG#123											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offeror's Printed/Typed Name WILLIAM L. HUNT Signature [Signature] Month 12 Day 31 Year 2011											
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Transporter signature (for exports only): _____ Date leaving U.S.: _____										
	17. Transporter Acknowledgment of Receipt of Materials										
TRANSPORTER	Transporter 1 Printed/Typed Name NEAL J. MASON Signature [Signature] Month 12 Day 31 Year 2011										
	Transporter 2 Printed/Typed Name _____ Signature _____ Month _____ Day _____ Year _____										
DESIGNATED FACILITY	18. Discrepancy										
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection										
	Manifest Reference Number: _____										
	18b. Alternate Facility (or Generator) _____ U.S. EPA ID Number _____										
	Facility's Phone: _____										
18c. Signature of Alternate Facility (or Generator) _____ Month _____ Day _____ Year _____											
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1.		2.		3.		4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a											
Printed/Typed Name _____						Signature _____		Month _____ Day _____ Year _____			

U.S. EPA Form 8700-22

Read all instructions before completing this form.

1. Federal regulations require generators and transporters of hazardous waste and owners or operators of receiving facilities designated on the manifest to complete this form (EPA Form 8700-22) and, if necessary, the continuation sheet (EPA Form 8700-22A) for both inter- and intrastate transportation of hazardous waste.
2. This manifest reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this manifest (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/e-manifest for additional information.
3. This form must be purchased from a registered printer (<https://www.epa.gov/hazgen/approved-registered-printers-epas-manifest-registry#how>) and has been designed to be filled out using standard computer printers; a firm point pen may also be used—press down hard. After June 30, 2018, this form can also be completed electronically in EPA's e-Manifest system.

The public burden related to the Uniform Hazardous Waste Manifest, which is approved under OMB 2950-0028, is estimated to average (per manifest) 60 minutes for generators, 20 minutes for transporters, and 20 minutes for owners and operators of receiving facilities designated on the manifest. This is a mandatory requirement under 40 CFR Part 262, Subpart B, 40 CFR Part 263, Subpart B, and 40 CFR Parts 264 and 265, Subpart E. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The completed form should be submitted in accordance with the instructions accompanying the form, or as specified in the corresponding regulations. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including suggestions for the use of e-Manifest, to the Director, Collection Strategies Division, U.S. Environmental Protection Agency (2022), 1200 Pennsylvania Ave., NW, Washington, D.C. 20460. Please include the OMB control number in any correspondence. Do NOT send the completed manifest forms to this address. Privacy Act Statement - None of the information collected under the Manifest Program is considered Personally Identifiable Information (PII) or Confidential Business Information (CBI).

I. Instructions for Generators

Item 1. Generator's U.S. EPA Identification Number

Enter the generator's U.S. EPA twelve-digit identification number, or the state generator identification number if the generator site does not have an EPA identification number.

Item 2. Page 1 of

Enter the total number of pages used to complete this manifest (i.e., the first page (EPA Form 8700-22) plus the number of continuation sheets (EPA Form 8700-22A), if any).

Item 3. Emergency Response Phone Number

Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must:

1. Be the number of the generator or the number of an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;
2. Reach a phone that is monitored 24 hours a day at all times the waste is in transportation (including transportation related storage); and
3. Reach someone who is either knowledgeable of the hazardous waste being shipped and has comprehensive emergency response and spill cleanup/incident mitigation information for the material being shipped or has immediate access to a person who has that knowledge and information about the shipment.

Note: Emergency Response phone number information should only be entered in Item 3 when there is one phone number that applies to all the waste materials described in Item 9b. If a situation (e.g., consolidated shipments) arises where more than one Emergency Response phone number applies to the various wastes listed on the manifest, the phone numbers associated with each specific material should be entered after its description in Item 9b.

Item 4. Manifest Tracking Number

This unique tracking number must be pre-printed on the manifest by the forms printer.

Item 5. Generator's Mailing Address, Phone Number and Site Address

Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.

Item 6. Transporter 1 Company Name and U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7. Transporter 2 Company Name and U.S. EPA ID Number

If applicable, enter the company name and U.S. EPA ID number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here.

If more than two transporters are needed, use a continuation sheet(s) (EPA Form 8700-22A).

Item 8. Designated Facility Name, Site Address, and U.S. EPA ID Number

Enter the company name and site address of the facility designated to receive the waste listed on this manifest. Also enter the facility's phone number and the U.S. EPA twelve-digit identification number of the facility.

Item 9. U.S. DOT Description (Including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

Item 9a. If the wastes identified in Item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this item next to the corresponding hazardous material identified in Item 9b.

Item 9b. Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UNNA) and Packing Group for each waste as identified in 49 CFR part 172. Include technical name(s) and reportable quantity references, if applicable.

Note: If additional space is needed for waste descriptions, enter these additional descriptions in Item 27 on the continuation sheet (EPA Form 8700-22A). Also, if more than one Emergency Response phone number applies to the various wastes described in either Item 9b or Item 27, enter applicable Emergency Response phone numbers immediately following the shipping descriptions for those items.

Item 10. Containers (Number and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

TABLE I—TYPES OF CONTAINERS

BA = Burlap, cloth, paper, or plastic bags.	DT = Dump truck.
CF = Fiber or plastic boxes, cartons, cases.	DW = Wooden drums, barrels, kegs.
CM = Metal boxes, cartons, cases (including roll-offs).	HG = Hopper or gondola cars.
CW = Wooden boxes, cartons, cases.	TC = Tank cars.
CY = Cylinders.	TP = Portable tanks.
DF = Fiberboard or plastic drums, barrels, kegs.	TT = Cargo tanks (tank trucks).
DM = Metal drums, barrels, kegs.	

Item 11. Total Quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to the nearest whole unit, and do not enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow you to report quantities with precision. Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not acceptable as estimates.

Item 12. Units of Measure (Weight/Volume)

Enter, in designated boxes, the appropriate abbreviation from Table II (below) for the unit of measure.

TABLE II—UNITS OF MEASURE

G = Gallons (liquids only).	N = Cubic Meters.
K = Kilograms.	P = Pounds.
L = Liters (liquids only).	T = Tons (2000 Pounds).
M = Metric Tons (1000 kilograms).	Y = Cubic Yards.

Note: Tons, Metric Tons, Cubic Meters, and Cubic Yards should only be reported for very large bulk shipments, such as rail cars, tank trucks, or barges.

Item 13. Waste Codes

Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

Item 14. Special Handling Instructions and Additional Information

1. Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in Item 12.
2. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of polychlorinated biphenyl (PCB) waste descriptions and PCB out-of-service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

Item 15. Generator's/Officer's Certifications

1. The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements. The Generator's Certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation (the shipper's certification). The content of the shipper's certification statement is as follows: "I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent." When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the offeror of the shipment.
2. Generator or Offeror personnel may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator/officer certification, to indicate that the individual signs as the employee or agent of the named principal.

Note: All of the above information except the handwritten signature required in Item 15 may be pre-printed. (Handwritten signatures are not applicable if the generator is preparing and signing an electronic manifest using EPA's e-Manifest system.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number OH0019448231		2. Page 1 of 1		3. Emergency Response Phone (304) 692-3166		4. Manifest Tracking Number 022928568 JJK		
		5. Generator's Name and Mailing Address 4K INDUSTRIAL PARK 1001 MAIN STREET MARTINS FERRY, OH 44835 Generator's Site Address (if different than mailing address) Generator's Phone: () - -								
6. Transporter 1 Company Name <i>The Penn Ohio Corp</i>		U.S. EPA ID Number <i>0HR 000028237</i>								
7. Transporter 2 Company Name		U.S. EPA ID Number								
8. Designated Facility Name and Site Address CHEMTRON CORPORATION 35850 SCHNEIDER CT AVON OH 44011 Facility's Phone: (440) 927-6075		U.S. EPA ID Number OH0055060609								
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))				10. Containers No. Type		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	X	1. RQ, UN3264, Waste Corrosive liquid, acid or inorganic with pH < 2. PGII (Hydrochloric Acid, Phosphoric acid) <i>None sent</i>				1		1		D002 D001 D008
	X	2. RQ, UN1824, Waste Sodium Hydroxide Solution, 2. PGII				15 TP		3750	G	D002
		3.								
		4.								
14. Special Handling Instructions and Additional Information 1. 20210625-055 WID: 50568-ERG #154 2. 20210625-069 WID: 50570-ERG #134										
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.										
Generator's/Offor's Printed/Typed Name <i>Robert L Hunt</i> Signature <i>Robert L Hunt</i> Month Day Year <i>12/2/21</i>										
TRANSPORTER	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:									
	17. Transporter Acknowledgment of Receipt of Materials Transporter 1 Printed/Typed Name <i>NEAL J Mason</i> Signature <i>Neal J Mason</i> Month Day Year <i>12/2/21</i> Transporter 2 Printed/Typed Name Signature Month Day Year									
DESIGNATED FACILITY	18. Discrepancy 18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection Manifest Reference Number: U.S. EPA ID Number 18b. Alternate Facility (or Generator) U.S. EPA ID Number Facility's Phone: 18c. Signature of Alternate Facility (or Generator) Month Day Year									
	19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems) 1. 2. 3. 4.									
	20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a Printed/Typed Name Signature Month Day Year									

- [illegible]

Item 1. Generator's U.S. EPA Identification Number

Item 2, Page 1 of 1

Enter the total number of pages used to complete this manifest (i.e., the first page (EPA Form 8700-22) plus the number of continuation sheets (EPA Form 8700-22A), if any).

Item 3. Emergency Response Phone Number

Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must: - - - - -

1. Be the number of the generator or the number of an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;
2. Reach a phone that is monitored 24 hours a day at all times the waste is in transportation (including transportation related storage); and
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Item 6. Transporter 1 Company Name, and U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7. Transporter 2 Company Name and U.S. EPA ID Number

If applicable, enter the company name and U.S. EPA ID number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here.

If more than two transporters are needed, use a continuation sheet(s) (EPA Form 3700-22A).

Item 8. Designated Facility Name, Site Address, and U.S. EPA ID Number

Enter the company name and site address of the facility designated to receive the waste listed on this manifest. Also enter the facility's phone number and the U.S. EPA twelve-digit identification number of the facility.

Item 9. U.S. DOT Description (Including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

Item 9c. If the wastes identified in Item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this item next to the corresponding hazardous material identified in Item 9b.

Item 9b. Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UN/NA) and Packing Group for each waste as identified in 49 CFR part 172. Include technical name(s) and reportable quantity references, if applicable.

Note: If additional space is needed for waste descriptions, enter these additional descriptions in Item 27 on the continuation sheet (EPA Form 8700-22A). Also, if more than one Emergency Response phone number applies to the various wastes described in either Item 9b or Item 27, enter applicable Emergency Response phone numbers immediately following the shipping descriptions for those items.

Item 10. Containers (Number and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

TABLE I--TYPES OF CONTAINERS

BA = Burlap, cloth, paper, or plastic bags.	DT = Dump truck.
CF = Fiber or plastic boxes, cartons, cases.	DW = Wooden drums, barrels, kegs.
CM = Metal boxes, cartons, cases (including roll-offs).	HG = Hopper or gondola cars.
CW = Wooden boxes, cartons, cases.	TC = Tank cars.
CY = Cylinders.	TP = Portable tanks.
DF = Fiberboard or plastic drums, barrels, kegs.	TT = Cargo tanks (tank trucks).
DM = Metal drums, barrels, kegs.	

Item 11. Total Quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to the nearest whole unit, and do not enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow you to report quantities with precision.

Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not ascertainable as estimates.

Item 12. Units of Measure (Weight/Volume)

Enter, in designated boxes, the appropriate abbreviation from Table II (below) for the unit of measurement.

TABLE II—UNITS OF MEASURE

G = Gallons (liquids only).
K = Kilograms.
L = Liters (liquids only).
M = Metric Tons (1000 kilograms).

N = Cubic Meters.
P = Pounds.
T = Tons (2000 Pounds).
Y = Cubic Yards.

Note: Tons, Metric Tons, Cubic Meters, and Cubic Yards should only be reported for very large bulk shipments, such as rail cars, tank trucks, or barges.

Item 13. Waste Codes

Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

Item 14. Special Handling Instructions and Additional Information

1. Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste/profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in Item 12.
2. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of polychlorinated biphenyl (PCB) waste descriptions and PCB out-of-service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

Item 15. Generator's/Officer's Certifications

1. The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements. The Generator's Certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation (the shipper's certification). The content of the shipper's certification statement is as follows: "I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent." When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the offeror of the shipment.
2. Generator or Offeror personnel may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator/offeror certification, to indicate that the individual signs as the employee or agent of the named principal.

Note: All of the above information except the handwritten signature required in Item 15 may be pre-printed. (Handwritten signatures are not applicable if the generator is preparing and signing an electronic manifest using EPA's e-Manifest system.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number OHD010448221		2. Page 1 of 1		3. Emergency Response Phone (304) 639-3166		4. Manifest Tracking Number 022927294 JJK			
		5. Generator's Name and Mailing Address 4K INDUSTRIAL PARK 1001 MAIN STREET MARTINS FERRY, OH 43935								Generator's Site Address (if different than mailing address)	
6. Transporter 1 Company Name The Penn Ohio Corp		U.S. EPA ID Number OHR 00022837									
7. Transporter 2 Company Name		U.S. EPA ID Number									
8. Designated Facility Name and Site Address CHEMTRON CORPORATION 35650 SCHNEIDER CT AVON OH 44011		U.S. EPA ID Number OHD066060609									
Facility's Phone: (440) 937-6279											
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes					
		No.	Type								
X	1. RQ, UN2254, Waste Corrosive liquid, acidic, inorganic, n.o.s., 3, PGII (Hydrochloric Acid, Phosphoric acid)	020	TT	617		D002	D007	D008			
	2.										
	3.										
	4.										
14. Special Handling Instructions and Additional Information 1. 20210625-051 MID: 50966 ERG #134											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations, if export shipment and I am the Primary Exporter. I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offor's Printed/Typed Name BRAND HUNT						Signature <i>Brand Hunt</i>		Month Day Year 10 06 21			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____									
17. Transporter Acknowledgment of Receipt of Materials											
Transporter 1 Printed/Typed Name NEAL J MASON						Signature <i>Neal J Mason</i>		Month Day Year 10 06 21			
Transporter 2 Printed/Typed Name						Signature		Month Day Year			
18. Discrepancy											
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection											
Manifest Reference Number: _____											
18b. Alternate Facility (or Generator) U.S. EPA ID Number											
Facility's Phone: _____											
18c. Signature of Alternate Facility (or Generator) Month Day Year											
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1.		2.		3.		4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a											
Printed/Typed Name						Signature		Month Day Year			

1. Federal regulations require generators and transporters of hazardous waste and owners or operators of receiving facilities designated on the manifest to complete this form (EPA Form 8700-22) and, if necessary, the continuation sheet (EPA Form 8700-22A) for both inter- and intrastate transportation of hazardous waste.
2. This manifest reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this manifest (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/e-manifest for additional information.
3. This form must be purchased from a registered printer (<https://www.epa.gov/hwgenerators/approved-registered-printers-epas-manifest-registryhow>) and has been designed to be filled out using standard computer printers; a firm point pen may also be used—press down hard. After June 30, 2019, this form can also be completed electronically in EPA's e-Manifest system.

[illegible]

I. Instructions for Generators

Item 1. Generator's U.S. EPA Identification Number

Enter the generator's U.S. EPA twelve-digit identification number, or the state generator identification number if the generator site does not have an EPA identification number.

Item 2, Page 1 of

Enter the total number of pages used to complete this manifest (i.e., the first page (EPA Form 8700-22) plus the number of continuation sheets (EPA Form 8700-22A), if any).

Item 3. Emergency Response Phone Number

Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must:

1. Be the number of the generator or the number of an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;
2. Reach a phone that is monitored 24 hours a day at all times the waste is in transportation (including transportation related storage); and
3. Reach someone who is either knowledgeable of the hazardous waste being shipped and has comprehensive emergency response and spill cleanup/incident mitigation information for the material being shipped or has immediate access to a person who has that knowledge and information about the shipment.

Note: Emergency Response phone number information should only be entered in Item 3 when there is one phone number that applies to all the waste materials described in Item 9b. If a situation (e.g., consolidated shipments) arises where more than one Emergency Response phone number applies to the various wastes listed on the manifest, the phone numbers associated with each specific material should be entered after its description in Item 9b.

Item 4. Manifest Tracking Number

This unique tracking number must be pre-printed on the manifest by the forms printer.

Item 5. Generator's Mailing Address, Phone Number and Site Address

Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note: the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.

Item 6. Transporter. 1 Company Name, and U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7. Transporter 2 Company Name and U.S. EPA ID Number

If applicable, enter the company name and U.S. EPA ID number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here.

If more than two transporters are needed, use a continuation sheet(s) (EPA Form 0700-22A).

Item 8. Designated Facility Name, Site Address, and U.S. EPA ID Number

Enter the company name and site address of the facility designated to receive the waste listed on this manifest. Also enter the facility's phone number and the U.S. EPA twelve-digit identification number of the facility.

Item 9. U.S. DOT Description (including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

Item 9a. If the wastes identified in Item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this item next to the corresponding hazardous material identified in Item 9b.

Item 9b. Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UN/NA) and Packing Group for each waste as identified in 49 CFR part 172. Include technical name(s) and reportable quantity references, if applicable.

Note: If additional space is needed for waste descriptions, enter these additional descriptions in Item 27 on the continuation sheet (EPA Form 8700-22A). Also, if more than one Emergency Response phone number applies to the various wastes described in either Item 9b or Item 27, enter applicable Emergency Response phone numbers immediately following the shipping descriptions for those items.

Item 10. Containers (Number and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table 1 (below) for the type of container.

TABLE I.—TYPES OF CONTAINERS

BA = Burlap, cloth, paper, or plastic bags.	DT = Dump truck.
CF = Fiber or plastic boxes, cartons, cases.	DW = Wooden drums, barrels, kegs.
CM = Metal boxes, cartons, cases (including roll-offs).	HG = Hopper or gondola cars.
CW = Wooden boxes, cartons, cases.	TC = Tank cars.
CY = Cylinders.	TP = Portable tanks.
DF = Fiberboard or plastic drums, barrels, kegs.	TT = Cargo tanks (tank trucks).
DM = Metal drums, barrels, kegs.	

Item 11. Total Quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to the nearest whole unit, and do not enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow you to report quantities with precision.

Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not acceptable as estimates.

Now 12. Units of Measure (Weight/Volume) -

Enter, in designated boxes, the appropriate abbreviation from Table II (below) for the unit of measure.

TABLE II.—UNITS OF MEASURE

G = Gallons (liquids only).	N = Cubic Meters.
K = Kilograms.	P = Pounds.
L = Liters (liquids only).	T = Tons (2000 Pounds).
M = Metric Tons (1000 kilograms).	Y = Cubic Yards.

Note: Tons, Metric Tons, Cubic Meters, and Cubic Yards should only be reported for very large bulk shipments, such as rail cars, tank trucks, or barges.

Item 13. Waste Codes

Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

Item 14. Special Handling Instructions and Additional Information

1. Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in Item 12.
2. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of polychlorinated biphenyl (PCB) waste descriptions and PCB out-of-service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

Item 15. Generator's/Offeror's Certifications

1. The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements. The Generator's Certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation (the shipper's certification). The content of the shipper's certification statement is as follows: "I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable International and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent." When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the offeror of the shipment.
2. Generator or Offeror personnel may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator/offeror certification, to indicate that the individual signs as the employee or agent of the named principal.

Note: All of the above information except the handwritten signature required in Item 15 may be pre-printed. (Handwritten signatures are not applicable if the generator is preparing and signing an electronic manifest using EPA's e-Manifest system.)

DESIGNATED FACILITY

U.S. EPA Form 8700-22

Read all instructions before completing this form.

1. Federal regulations require generators and transporters of hazardous waste and owners or operators of receiving facilities designated on the manifest to complete this form (EPA Form 8700-22) and, if necessary, the continuation sheet (EPA Form 8700-22A) for both inter- and intrastate transportation of hazardous waste.
2. This manifest reflects formatting changes made by U.S. EPA in December 2017. Beginning on June 30, 2018, this manifest (Revision 12-17) must be used and all previous editions are prohibited. Go to www.epa.gov/manifest for additional information.
3. This form must be purchased from a registered printer (<https://www.epa.gov/hwgenerators/approved-registered-printers-epas-manifest-registry-how>) and has been designed to be filled out using standard computer printers; a firm point pen may also be used—press down hard. After June 30, 2018, this form can also be completed electronically in EPA's e-Manifest system.

The public burden estimate for this form is 0.0001 hours per response, which is approved under OMB 0705-0170, as a collection of information for generators, 20 minutes for transporters, and 30 minutes for owners and operators of receiving facilities designated on the manifest. This is a mandatory collection under 40 CFR Part 262, Subpart B, 40 CFR Part 263, Subpart B, and 40 CFR Part 264 and 265, Subpart E. A copy of your signed consent to provide information is included in this form. If you do not wish to provide information, you may request a copy of this form from the EPA. The information provided in this form is for the use of the EPA and its designated receiving facilities. The information provided in this form is not to be used for any other purpose. The information provided in this form is not to be used for any other purpose. The information provided in this form is not to be used for any other purpose.

I. Instructions for Generators

Item 1. Generator's U.S. EPA Identification Number

Enter the generator's U.S. EPA twelve-digit identification number, or the state generator identification number if the generator site does not have an EPA identification number.

Item 2. Page 1 of

Enter the total number of pages used to complete this manifest (i.e., the first page (EPA Form 8700-22) plus the number of continuation sheets (EPA Form 8700-22A), if any).

Item 3. Emergency Response Phone Number

Enter a phone number for which emergency response information can be obtained in the event of an incident during transportation. The emergency response phone number must:

1. Be the number of the generator or the number of an agency or organization who is capable of and accepts responsibility for providing detailed information about the shipment;
2. Reach a phone that is monitored 24 hours a day at all times the waste is in transportation (including transportation related storage); and
3. Reach someone who is either knowledgeable of the hazardous waste being shipped and has comprehensive emergency response and spill cleanup/incident mitigation information for the material being shipped or has immediate access to a person who has that knowledge and information about the shipment.

Note: Emergency Response phone number information should only be entered in Item 3 when there is one phone number that applies to all the waste materials described in Item 9b. If a situation (e.g., consolidated shipments) arises where more than one Emergency Response phone number applies to the various wastes listed on the manifest, the phone numbers associated with each specific material should be entered after its description in Item 9b.

Item 4. Manifest Tracking Number

This unique tracking number must be pre-printed on the manifest by the forms printer.

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Enter the name of the generator, the mailing address to which the completed manifest signed by the designated facility should be mailed, and the generator's telephone number. Note, the telephone number (including area code) should be the normal business number for the generator, or the number where the generator or his authorized agent may be reached to provide instructions in the event the designated and/or alternate (if any) facility rejects some or all of the shipment. Also enter the physical site address from which the shipment originates only if this address is different than the mailing address.

Item 6. Transporter 1 Company Name and U.S. EPA ID Number

Enter the company name and U.S. EPA ID number of the first transporter who will transport the waste. Vehicle or driver information may not be entered here.

Item 7. Transporter 2 Company Name and U.S. EPA ID Number

If applicable, enter the company name and U.S. EPA ID number of the second transporter who will transport the waste. Vehicle or driver information may not be entered here.

If more than two transporters are needed, use a continuation sheet(s) (EPA Form 8700-22A).

Item 8. Designated Facility Name, Site Address, and U.S. EPA ID Number

Enter the company name and site address of the facility designated to receive the waste listed on this manifest. Also enter the facility's phone number and the U.S. EPA twelve-digit identification number of the facility.

Item 9. U.S. DOT Description (Including Proper Shipping Name, Hazard Class or Division, Identification Number, and Packing Group)

Item 9a. If the wastes identified in Item 9b consist of both hazardous and nonhazardous materials, then identify the hazardous materials by entering an "X" in this item next to the corresponding hazardous material identified in Item 9b.

Item 9b. Enter the U.S. DOT Proper Shipping Name, Hazard Class or Division, Identification Number (UNNA) and Packing Group for each waste as identified in 49 CFR part 172. Include technical name(s) and reportable quantity references, if applicable.

Note: If additional space is needed for waste descriptions, enter these additional descriptions in Item 27 on the continuation sheet (EPA Form 8700-22A). Also, if more than one Emergency Response phone number applies to the various wastes described in either Item 9b or Item 27, enter applicable Emergency Response phone numbers immediately following the shipping descriptions for those items.

Item 10. Containers (Number and Type)

Enter the number of containers for each waste and the appropriate abbreviation from Table I (below) for the type of container.

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BA = Burlap, cloth, paper, or plastic bags.	DT = Dump truck.
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CW = Wooden boxes, cartons, cases.	TC = Tank cars.
CY = Cylinders.	TP = Portable tanks.
OF = Fiberboard or plastic drums, barrels, kegs.	TT = Cargo tanks (tank trucks).
DM = Metal drums, barrels, kegs.	

Item 11. Total Quantity

Enter, in designated boxes, the total quantity of waste. Round partial units to the nearest whole unit, and do not enter decimals or fractions. To the extent practical, report quantities using appropriate units of measure that will allow you to report quantities with precision. Waste quantities entered should be based on actual measurements or reasonably accurate estimates of actual quantities shipped. Container capacities are not acceptable as estimates.

Item 12. Units of Measure (Weight/Volume)

Enter, in designated boxes, the appropriate abbreviation from Table II (below) for the unit of measure.

TABLE II—UNITS OF MEASURE

G = Gallons (liquids only).	N = Cubic Meters.
K = Kilograms.	P = Pounds.
L = Liters (liquids only).	T = Tons (2000 Pounds).
M = Metric Tons (1000 kilograms).	Y = Cubic Yards.

Note: Tons, Metric Tons, Cubic Meters, and Cubic Yards should only be reported for very large bulk shipments, such as rail cars, tank trucks, or barges.

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Enter up to six federal and state waste codes to describe each waste stream identified in Item 9b. State waste codes that are not redundant with federal codes must be entered here, in addition to the federal waste codes which are most representative of the properties of the waste.

Item 14. Special Handling Instructions and Additional Information

1. Generators may enter any special handling or shipment-specific information necessary for the proper management or tracking of the materials under the generator's or other handler's business processes, such as waste profile numbers, container codes, bar codes, or response guide numbers. Generators also may use this space to enter additional descriptive information about their shipped materials, such as chemical names, constituent percentages, physical state, or specific gravity of wastes identified with volume units in Item 12.
2. This space may be used to record limited types of federally required information for which there is no specific space provided on the manifest, including any alternate facility designations; the manifest tracking number of the original manifest for rejected wastes and residues that are re-shipped under a second manifest; and the specification of polychlorinated biphenyl (PCB) waste descriptions and PCB out-of-service dates required under 40 CFR 761.207. Generators, however, cannot be required to enter information in this space to meet state regulatory requirements.

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1. The generator must read, sign, and date the waste minimization certification statement. In signing the waste minimization certification statement, those generators who have not been exempted by statute or regulation from the duty to make a waste minimization certification under section 3002(b) of RCRA are also certifying that they have complied with the waste minimization requirements. The Generator's Certification also contains the required attestation that the shipment has been properly prepared and is in proper condition for transportation (the shipper's certification). The content of the shipper's certification statement is as follows: "I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent." When a party other than the generator prepares the shipment for transportation, this party may also sign the shipper's certification statement as the officer of the shipment.
2. Generator or Officer personnel may preprint the words, "On behalf of" in the signature block or may hand write this statement in the signature block prior to signing the generator/officer certification, to indicate that the individual signs as the employee or agent of the named principal.

Note: All of the above information except the handwritten signature required in Item 15 may be pre-printed. (Handwritten signatures are not applicable if the generator is preparing and signing an electronic manifest using EPA's e-Manifest system.)

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number CHD010448231		2. Page 1 of 1		3. Emergency Response Phone (304) 633-3166		4. Manifest Tracking Number 022927297 JJK			
		5. Generator's Name and Mailing Address 4K INDUSTRIAL PARK 1001 MAIN STREET MARTINS FERRY, OH 43935								Generator's Site Address (if different than mailing address)	
6. Transporter 1 Company Name The Penn Ohio Corp								U.S. EPA ID Number OH 000028237			
7. Transporter 2 Company Name								U.S. EPA ID Number			
8. Designated Facility Name and Site Address CHEMTRON CORPORATION 25850 SCHNEIDER CT AVON OH 44011								U.S. EPA ID Number CHD066060609			
Facility's Phone: (440) 937-6278											
9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes					
		No.	Type								
X	1. RQ, UN3264, Waste Corrosive liquid, acidic, inorganic, n.o.s., 8, PGII (Hydrochloric Acid, Phosphoric acid)	14	TP	35000	P	D002	D007	D008			
X	2. NA3082, Hazardous Waste liquid, n.o.s., 8, PGIII (D008)	04	TP	8600	P	D008					
	3.										
	4.										
14. Special Handling Instructions and Additional Information 1. 20210625-051 WID: 50568 ERG #154 2. 20210816-033 WID: 50569 ERG #171											
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.											
Generator's/Offeror's Printed/Typed Name Robert Hunt Agent for Chemtron						Signature <i>[Signature]</i>		Month Day Year 10 13 21			
16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____ Date leaving U.S.: _____											
17. Transporter Acknowledgment of Receipt of Materials											
Transporter 1 Printed/Typed Name NEAL J MASON						Signature <i>[Signature]</i>		Month Day Year 10 13 21			
Transporter 2 Printed/Typed Name						Signature		Month Day Year			
18. Discrepancy											
18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection											
Manifest Reference Number: _____ U.S. EPA ID Number											
18b. Alternate Facility (or Generator)											
Facility's Phone: _____											
18c. Signature of Alternate Facility (or Generator)											
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)											
1.		2.		3.		4.					
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in item 18a											
Printed/Typed Name						Signature		Month Day Year			

1. Instructions for Generators

Note: All of the above information except the handwritten signature required in Item 15 may be pre-printed. (Handwritten signatures are not applicable if the generator is preparing and signing an electronic manifest using EPA's e-Manifest system.)

GENERATOR

INT'L

TRANSPORTER

DESIGNATED FACILITY

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number 0HD010448231	2. Page 1 of 1	3. Emergency Response Phone 304-639-3166	4. Waste Tracking Number 122221	
5. Generator's Name and Mailing Address 4K Industrial Park P.O. BOX 37 Martins Ferry OH 43935			Generator's Site Address (if different than mailing address) 4K Industrial Park 1001 Main Street Martins Ferry OH 43935			
Generator's Phone: 304 233-3369						
6. Transporter 1 Company Name The PennOhio Corporation			U.S. EPA ID Number OHR000028837			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address The PennOhio Corporation 4813 Woodman Avenue Ashtabula OH 44004			U.S. EPA ID Number OHR000028837			
Facility's Phone: 440 992-7906						
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. Non Hazardous Liquid Glass		05	DM	2250	P	NONE
2.						
3.						
4.						
13. Special Handling Instructions and Additional Information 1211028-12						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offoror's Printed/Typed Name Brent E Hunt			Signature [Signature]		Month Day Year 12 21 21	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: _____						
Transporter Signature (for exports only): _____ Date leaving U.S.: _____						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name NEAL J MAZUN			Signature [Signature]		Month Day Year 12 21 21	
Transporter 2 Printed/Typed Name			Signature		Month Day Year	
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number: _____						
17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
Facility's Phone: _____						
17c. Signature of Alternate Facility (or Generator)			Month Day Year			
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in Item 17a						
Printed/Typed Name			Signature		Month Day Year	

GENERATOR

INTL

TRANSPORTER

DESIGNATED FACILITY

↓

NON-HAZARDOUS WASTE MANIFEST		1. Generator ID Number OHD010448231	2. Page 1 of 1	3. Emergency Response Phone 304-639-3166	4. Waste Tracking Number 110281	
5. Generator's Name and Mailing Address 4k Industrial Park P.O. BOX 37 Martins Ferry OH 43935 Generator's Phone: 304-233-3363			Generator's Site Address (if different than mailing address) 4K Industrial Park 1001 Main Street Martins Ferry OH 43935			
6. Transporter 1 Company Name The PennOhio Corporation			U.S. EPA ID Number OHR000028837			
7. Transporter 2 Company Name			U.S. EPA ID Number			
8. Designated Facility Name and Site Address The PennOhio Corporation 4813 Woodman Avenue Ashtabula OH 44004 Facility's Phone: 440-932-7305			U.S. EPA ID Number OHR000028837			
9. Waste Shipping Name and Description		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	
		No.	Type			
1. Non Hazardous Sludge- Yellow 77 Pro Wire Pulling Lubricant		08	DM	1415	G	NONE
2. Non Hazardous Liquid - Coastal Heavy Duty Diesel Engine Oil		08	TP DM	1415	G	NONE
3. Non Hazardous Liquid - Shell Dexcool AF/C 50/50		08	DM	1415	G	NONE
4.						
13. Special Handling Instructions and Additional Information 1) 211028-09 WID # 45743 2) 211028-10 WID # 45742 3) 211028-11 WID # 45741						
14. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.						
Generator's/Offor's Printed/Typed Name BRIAN H. HART			Signature [Signature]		Month Day Year 11/02/01	
15. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S. Port of entry/exit: Date leaving U.S.:						
16. Transporter Acknowledgment of Receipt of Materials						
Transporter 1 Printed/Typed Name Alfred S. Mason			Signature [Signature]		Month Day Year 11/02/01	
Transporter 2 Printed/Typed Name			Signature		Month Day Year	
17. Discrepancy						
17a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection						
Manifest Reference Number:						
17b. Alternate Facility (or Generator)			U.S. EPA ID Number			
Facility's Phone:						
17c. Signature of Alternate Facility (or Generator)			Month Day Year			
18. Designated Facility Owner or Operator: Certification of receipt of materials covered by the manifest except as noted in item 17a						
Printed/Typed Name			Signature		Month Day Year	

Appendix D

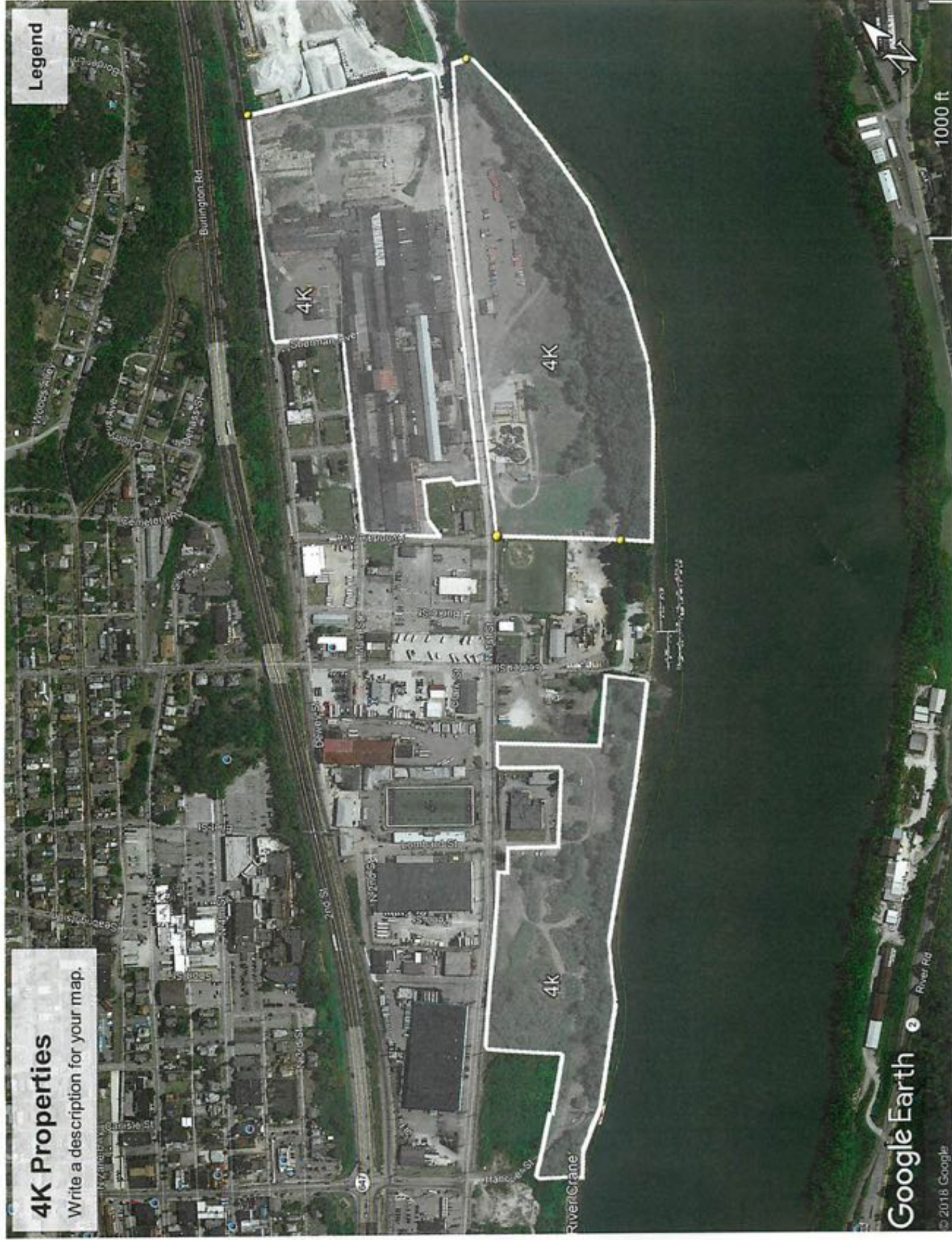
Aerial Images



4K Properties

Write a description for your map.

Legend



Appendix E

Stormwater No Exposure Certification



John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

Dec 10, 2018

4K INDUSTRIAL PARK
TERRY DUSZ
PO BOX 6561
WHEELING, WV 26003

Re: No Exposure Certification for Exclusion from Industrial NPDES Storm Water Permitting

Dear Storm Water Discharger,

Ohio EPA has received your No Exposure Certification for conditional exemption from National Pollutant Discharge Elimination System (NPDES) storm water permitting. The certification is non-transferrable. If a new operator assumes control of your facility, the new operator must immediately complete and submit a new No Exposure Certification to obtain the exemption. The letter acknowledges receipt of a No Exposure Certification for the following facility:

Facility Name:	4K INDUSTRIAL PARK
Facility Location:	1001 MAIN ST
City:	MARTINS FERRY
County:	Belmont
Township:	
Ohio EPA Facility Permit Number:	0GRN00248*FG
Permit Effective Date:	Dec 10, 2018
Permit Expiration Date:	Dec 07, 2023

U.S. EPA's December 8, 1999 NPDES Storm Water Phase II rulemaking included a requirement that a written certification of no exposure be submitted to the appropriate NPDES permitting authority at least once every five years. Please make note to submit a complete industrial No Exposure Certification to Ohio EPA within five years from your last certification date. If you plan to change facility operations such that it is no longer eligible for the no exposure exemption, you must submit the appropriate permit application at least 180 days prior to commencing discharge of potentially contaminated storm water.

To view your electronic submissions and permits please Logon in to the Ohio EPA's eBusiness Center at <http://ebiz.epa.ohio.gov>.

If you need assistance or have questions please call (614) 644-2001 and ask for Industrial No Exposure Certification support or visit our website at <http://www.epa.ohio.gov>.

Sincerely,

Craig W. Butler
Director

Appendix F

Phase I Assessment and Groundwater Logs

DRAFT

**OHIO VOLUNTARY ACTION PROGRAM
PHASE I PROPERTY ASSESSMENT REPORT
SEVERSTAL WHEELING, INC. – MARTINS FERRY PLANT
MARTINS FERRY, BELMONT COUNTY, OHIO**

Prepared For:

SEVERSTAL WHEELING, INC.

Prepared By:

**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
EXPORT, PENNSYLVANIA**

CEC Project 071-795.3

April 20, 2010

**OHIO VOLUNTARY ACTION PROGRAM
PHASE I PROPERTY ASSESSMENT REPORT
SEVERSTAL WHEELING, INC. – MARTINS FERRY PLANT
MARTINS FERRY, BELMONT COUNTY, OHIO**

CEC Project 071-795.3

April 20, 2010

DRAFT

Robert C. Dlugos, P.G.

James E. Zentmeyer, P.E., CP

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Appendix B – EDR Environmental Database Search Report
Appendix C – Historical Topographic Maps, Aerial Photographs, and Sanborn Fire Insurance Maps
Appendix D – EDR Industrial Site Report
Appendix E – Site Photographs
Appendix F – Documentation of Contacts with Local Officials and Agencies
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1.0 GENERAL INFORMATION

1.1 GENERAL BACKGROUND AND PURPOSE

Civil & Environmental Consultants, Inc. (CEC) has completed a Phase I Property Assessment of an approximately 57-acre property owned by Severstal Wheeling, Inc. (SWI) located at 421 North First Street in Martins Ferry, Ohio. The purpose of the Phase I Property Assessment was to assess the steel manufacturing facility under Ohio Voluntary Action Program (VAP) Phase I Property Assessment requirements as set forth in Ohio Administrative Code (O.A.C.) 3745-300-06. Throughout the remainder of this report, the property described above is referred to as the "Subject Property".

This report has been prepared by Robert C. Dlugos, P.G. and James E. Zentmeyer, P.E., Certified Professional #252. Resumes for Messrs. Dlugos and Zentmeyer are resented in Appendix A.

1.2 PROPERTY DESCRIPTION

The Subject Property is located at 421 North First Street near the intersection with Avondale Avenue in the northeastern portion of the City of Martins Ferry, Belmont County, Ohio. Figure 1 shows the location of the Subject Property on a 7.5-minute USGS topographic quadrangle map. Figure 2 is a site layout map based on recent aerial photography illustrating the location of buildings and structures that exist on the Subject Property. Photographs taken at the Subject Property during the site inspection are included in Appendix E.

The Subject Property includes approximately 57 acres as illustrated on Figure 2. The existing operations are located in what is historically referred to as the No. 2 Mill. The former No. 1 Mill, which has been entirely demolished, was previously located north of the No. 2 Mill as designated on Figure 2. Historical records indicate the subject property was first developed in 1874 by the Ohio City Nail Works Company (Reference 8). In 1878 the Laughlin Nail Company purchased the subject property and mill operations, expanding after fires destroyed the mill in

1881 and 1885 (Reference 8). According to records, the Laughlin Nail Company produced steel nails made exclusively from steel manufactured at the company's sister operation in Mingo Junction, Ohio (Reference 8). Incorporated in 1920 through a consolidation of three independent corporations, the Wheeling Steel Corporation is listed as the operator of the former No. 1 Mill beginning in 1924 and of the existing No. 2 Mill beginning in 1959. Wheeling Steel Corporation subsequently merged with the Pittsburgh Steel Company in 1968 to form Wheeling-Pittsburgh Steel Corporation, which was acquired by Severstal North America, Inc., on August 4, 2008 (Reference 13).

As stated previously, the former No. 1 Mill has been demolished and only remnants of former building foundations remain visible at the surface. Conversely, the area encompassing the existing No. 2 Mill is covered with buildings or structures associated with current steel manufacturing processes. Immediately east of the No. 2 Mill is an area covered by mostly asphalt paving, gravel, and soil/fill with varied degrees of vegetative cover. The Subject Property's Waste Water Treatment Plant (WWTP) and former Oil House are located in this area. The facility's general offices building is located immediately west of the existing No. 2 Mill, northwest of the intersection of Main Street and Sherman Avenue.

Entering the Subject Property from the intersection of Main Street and Sherman Avenue at the western end of the property, the first operations encountered are those associated with the 48-inch Galvanizing Line. The 38-inch Galvanizing Line, which is currently idled, is immediately east of the 48-inch Line. East of the 38-inch Line is the 60-inch Galvanizing Line. The Galvanizing Lines are rolling mills which contain batch tanks for alkali and acid cleaning solutions, zinc ammonium chloride flux, and molten zinc. In addition, hydraulic oil reservoirs are located on equipment at the beginning and end of each line. South of the galvanizing lines is a coil storage area. At the north end of each of the 48- and 60-inch Galvanizing Lines are Branding operations where product information is stamped onto the galvanized steel sheet using an alcohol based ink. Raw and waste inks as well as solvent used in the branding operation are stored north of the Branding operation in totes and drums.

Northwest of the Galvanizing Lines is the location of the Roof Shop which produces corrugated and galvanized roof sheeting under the SWI subsidiary Wheeling Corrugated. Northeast of the Galvanizing Lines is the Temper Mill and a coil storage area. South of the Temper Mill and coil storage area are the Operational and Engineering Offices, the Maintenance/Electrical Shop, and the Machine Shop. Immediately west of the Machine Shop is the Boiler House and Compressor Room.

At the southeast corner of the No. 2 Mill are the locations of the overhead hydrochloric acid tanks and the former waste oil storage area. However, waste oil storage has since been moved indoors, immediately north of the Galvanizing Lines. The Paint Shop is located slightly north of the overhead hydrochloric acid tanks. At the time of the site inspection the Paint Shop did not appear to be used regularly as only a few small containers were noted inside the building. East of the Paint Shop is the Oil Storage Shed and Zinc Waste Storage area. The Oil Storage Shed is open on the west side of the structure for easy access to drums and totes stored under roof. The Zinc Waste Storage area is outdoors and contained several steel carts with remnant zinc from the galvanizing process. West of the Zinc Waste Storage area is the former Oil House. The Oil House did not appear to be regularly used at the time of the site inspection, however, this was the location where various liquid products were stored and handled for delivery to the operational process lines. Liquids previously stored and handled at the Oil House include oil, acids, alkalis, and chromate solution for the "Chem-Treat" process.

The WWTP is situated east of the No. 2 Mill's southeast corner. Process water from the No. 2 Mill's operations is directed to the WWTP prior to discharge to the Ohio River via a National Pollutant Discharge Elimination System (NPDES) permitted discharge point.

As previously stated, the former No. 1 Mill is located north of the existing No. 2 Mill. At the time of the site inspection, the above ground structures associated with the former No. 1 Mill had been demolished leaving only concrete floors and foundations visible at the surface.

Onsite buildings are generally constructed of brick or steel with concrete floors. Several buildings, particular those with below-grade mechanical equipment for process lines, have basements. Additional details regarding the current and former onsite structures and related operations are provided in the following sections of this report.

The Subject Property is bordered to the west by State Route 7. Beyond Route 7 to the west are mostly residential properties within the City of Martins Ferry. North of the Subject Property is vacant land between State Route 7 and the Ohio River. To the south are commercial and industrial properties. Finally, the Ohio River forms the eastern Subject Property boundary. The area surrounding the Subject Property is shown on Figure 4.

The Subject Property is generally flat with a very gentle slope to the east in the direction of the Ohio River. As described above, much of the Subject Property, particularly the western portion where existing and former mill operations are located, is covered with buildings, concrete foundations, or is paved. Throughout these areas, storm water on the Subject Property is captured in storm water catch basins and discharged to NPDES permitted outfalls within the Subject Property that ultimately flow to the Ohio River. Rainwater which falls on uncovered portions of the Subject Property, which includes most of the area east of the No. 2 Mill, would infiltrate the surface and recharge shallow groundwater, ultimately discharging to the Ohio River as groundwater baseflow.

Most of the Subject Property is situated within the 100-year flood plain of the Ohio River (Reference 6). While limited, site-specific subsurface information has been gathered during the course of investigating and remediating groundwater in the vicinity of a former underground storage tank (UST) within the former No. 1 Mill (refer to Figure 2). This data indicates a shallow perched groundwater zone exists within slag fill while the uppermost regional groundwater zone occurs in alluvium underlying the slag fill. Regional groundwater flow direction within the alluvial aquifer is likely to the east in the direction of the Ohio River. This information corresponds to what one would predict within flood plain areas along the Ohio River

where subsurface geology typically consists of 40 to 80 feet of unconsolidated fluvial deposits (silt, sand, and gravel) resting directly on sedimentary bedrock (Reference 7).

1.3 PHASE I PROPERTY ASSESSMENT PROCEDURES

This assessment conforms to the requirements of the Ohio VAP relative to Phase I Property Assessments, as outlined in O.A.C. Section 3745-300-06. This Phase I assessment was also performed in general conformance with ASTM Standard E 1527, Standard Practice for Environmental Site Assessment: Phase I. Finally, it should be noted this assessment was completed in part to evaluate areas identified by United States Environmental Protection Agency (U.S. EPA) as preliminary Solid Waste Management Units (SWMU) and Areas of Concern (AOC).

BUT SHOULD WE DESCRIBE THE CONTEXT OF U.S. EPA'S IDENTIFICATION OF SWMUS AND AOC'S?

The assessment included the following:

- Review of available information relative to site history and ownership, including historic publications, aerial photographs and topographic maps, fire insurance maps, and documents contained in SWI's files;
- Review of available documents and databases pertaining to the regulatory history, environmental compliance, and spills and releases at the Subject Property and surrounding area, including file reviews at appropriate regulatory agencies and SWI, and an environmental database search;
- Review of available public documents relating to site geology and hydrogeology;
- Interviews with key SWI personnel and appropriate local and governmental officials; and,
- A site inspection.

1.4 INTENDED LAND USE

The Subject Property is planned to be used for industrial purposes in the future.

2.0 HISTORIC AND CURRENT USES OF THE SITE

This section summarizes the historic and current uses of the Subject Property, past and current ownership, and the results of interviews conducted with current employees familiar with the Subject Property. The history of the Subject Property presented in this section is based on following sources of information:

- Historical publications, topographic maps, aerial photographs, and Sanborn Fire Insurance Maps (Appendix C);
- Interviews with SWI employees; and
- Historical documents from SWI's files.

2.1 REVIEW OF PROPERTY OWNERSHIP HISTORY

Through information obtained from historical publications and Subject Property personnel, CEC was able to establish the Subject Property's ownership history dating back to the original industrial use of the Subject Property in 1874 as a nail manufacturing facility.

According to available records, the subject property was first developed in 1874 by the Ohio City Nail Works Company (Reference 8). In 1878 the Laughlin Nail Company purchased the subject property and mill operations, expanding operations each time fires destroyed the mill in 1881 and 1885 (Reference 8). By 1895, the Laughlin Nail Company operated the Nail Factory at the location of the former No. 1 Mill and a Tin Plate Factory at the location of the existing No. 2 Mill (Reference 1). The Laughlin Nail Company produced steel nails made exclusively from steel manufactured at the company's sister operation in Mingo Junction, Ohio (Reference 8). Between 1900 and 1908 the Nail Factory was sold to Wheeling Corrugating Company, which became part of the Wheeling Steel Corporation in 1920 (References 1 and 15). Between 1895 and 1900 the Tin Plate Factory was sold to the American Tin Plate Company who maintained

operations until sometime between 1924 and 1959 when this portion of the Subject Property was also sold to Wheeling Steel Corporation (Reference 1). Significant building expansions are noted throughout the ownership period by American Tin Plate Company as only the southernmost approximately 400 feet of the existing No. 2 Mill appears to be missing from the 1959 Sanborn Map, which shows the area occupied by residential dwellings (Reference 1). Based on the 1976 aerial photograph and 1959 aerial photograph and Sanborn Map, expansion and renovations of the Subject Property continued between 1959 and 1976, corresponding to the same period when Wheeling Steel Corporation merged with Pittsburgh Steel Company in 1968 to form Wheeling-Pittsburgh Steel Corporation (References 1 and 3). The restructuring of the domestic steel industry in the 1970s and 1980s has resulted in the gradual downsizing of operations conducted at the Subject Property since that time. Wheeling-Pittsburgh Steel Corporation continued to operate the Subject Property through a merger with Esmark Incorporated in 2007. Most recently, Severstal North America, Inc. acquired Esmark and Wheeling-Pittsburgh Steel on August 4, 2008, with operation and ownership of the Subject Property assigned to subsidiary corporation Severstal Wheeling, Inc. (Reference 13).

Considering the general Subject Property use has remained unchanged other than growth of the Subject Property's steel manufacturing capabilities since it was originally developed, and considering ownership and operation of the Subject Property by SWI's corporate predecessors and/or competitors can be traced back to the end of the 19th century, a continuous history of the Subject Property for the purposes of this Phase I Property Assessment has been developed as required by O.A.C. Section 3745-300-06(D)(1) without the need for reviewing the Subject Property's deed records.

2.2 REVIEW OF HISTORIC PHOTOGRAPHS AND MAPS

2.2.1 Aerial Photographs and Topographic Maps

Aerial photographs and topographic maps of the Subject Property and surrounding area were reviewed. Available aerial photographs reviewed were dated 1959, 1976, 1982, 1991, 1997,

2005, and 2006. Topographic maps dated 1902, 1942, 1956, 1968, 1978, 1984, 1992, and 1994 were also reviewed (Appendix C). Aerial photographs dated 1959 through 1997 are difficult to interpret due to poor resolution. However, these photographs as well as the 2005 and 2006 photographs depict the Subject Property structures which largely exist today. Noted exceptions are that the 1959 photograph does not include the southern-most portion of the No. 2 Mill which is a coil storage area south of the Galvanizing Lines. In addition, the 1991 through 2006 photographs depict the gradual demolition of the former No. 1 Mill.

The topographic maps show that the facility was mostly developed by the mid 1950's. Except for the addition of a coil storage building east of the Temper Mill, there are no discernable differences in site features from year to year on maps dated 1956 through 1994. The 1902 and 1942 maps are very small scale and difficult to interpret; however, each of these maps appear to indicate smaller buildings in the area of the No. 1 and No. 2 Mills.

2.2.2 Fire Insurance Maps

Sanborn Fire Insurance maps dated 1895, 1900, 1908, 1915, 1924, and 1959 (Appendix C) were reviewed to evaluate the history of the Subject Property and surrounding areas. The maps were used primarily to confirm the operational history described in Section 2.4. Other points of interest based on a review of the maps are as follows.

1885 Map – This map shows the presence of the Laughlin Nail Company's Nail Factory at the location of the former No. 1 Mill with no coverage of the existing No. 2 Mill area.

1895 Map – This map shows the presence of the Laughlin Nail Company's Nail Factory at the location of the former No. 1 Mill with little change from the 1885 Map. The Laughlin Nail Company's Tin Plate Factory is now depicted at the location of the existing No. 2 Mill.

1900 Maps – These maps show expansion in the area of the former No. 1 Mill of the Nail Factory to now include a Shovel Factory under the operation of the Laughlin Nail and Shovel

Company. Operations at the area of the existing No. 2 Mill are also expanded as the American Tin Plate Company is listed as the facility operator.

1908 Maps – These maps depict significant expansion of the former Laughlin Nail and Shovel Company as the Wheeling Corrugated Company operates a steel bucket and sheet galvanizing facility at the location of the former No. 1 Mill. The American Tin Plate Company also shows expansion as the onsite building is extended an additional block to the south, occupying an area where residential dwellings previously existed.

1915 Maps – Further expansion is noted at the Wheeling Corrugated Company with additional product storage and shipping areas as well as a corrugated roofing department. The American Tin Plate Company appears mostly unchanged since the 1908 Maps.

1924 Maps – Little change is noted in these maps from the 1915 Maps except that Wheeling Steel Corporation is listed as the operator of the formerly identified Wheeling Corrugated Company facility.

1959 Maps – An unidentified building has been added at the north end of the Wheeling Steel Corporation complex while no changes are noted at the former American Tin Plate Company facility except that Wheeling Steel Corporation is now also listed as the operator of this facility (the existing No. 2 Mill).

2.3 INTERVIEW WITH KEY EMPLOYEE AND FACILITY FILE REVIEW

CEC conducted interviews with Mr. Pat Smith of SWI's Environmental Control Department prior to and throughout the facility site inspections completed by Mr. Rob Dlugos of CEC in February 2008 and on July 7, 2009. The interviews were conducted to evaluate historical operations at the Subject Property and to inquire about Mr. Smith's knowledge of outstanding regulatory issues or historical releases of hazardous substances or petroleum products to the environment. Mr. Pat Smith has been employed as an Environmental Control Manager with

SWI since December 1992. Mr. Pat Smith's responsibilities at the Site were initiated in January 2000.

An operational history of the Subject Property was developed based on the interviews and document reviews, and is presented in Section 2.4. Information regarding raw materials and waste products associated with the current and historical operations are summarized and presented on Tables 1A and 1B.

2.4 HISTORICAL USES OF THE SUBJECT PROPERTY

The historical uses of the Subject Property described in this section are based on the information obtained from the sources described under Sections 2.1 through 2.3 above.

As previously discussed, the No. 1 Mill portion of the Subject Property was initially developed as a nail manufacturing facility in 1874 by the Ohio City Nail Works Company (Reference 8). This portion of the Subject Property remained a nail manufacturing facility through 1908 when Wheeling Corrugated Company operated a bucket and sheet metal galvanizing plant (Reference 1). The first documented industrial use of the No. 2 Mill area is in 1895 when the Laughlin Nail Company operated a Tin Plate Factory at the site (Reference 1). The Tin Plate Factory apparently operated in the area of the No. 2 Mill until sometime between 1924 and 1959 when Wheeling Steel Company acquired ownership from the American Sheet and Tin Plate Company (Reference 1). The existing galvanized steel facility at the No. 2 Mill has operated since this time.

While expansion and renovation of the No. 2 Mill continued through the 1960's, restructuring of the domestic steel industry in the 1970s and 1980s resulted in the gradual downsizing of operations conducted at the Subject Property since that time. Aerial photographs document the gradual demolition of buildings located in the former No. 1 Mill area between 1991 and 2006, where final operations were ceased in **ADD DATE** (Reference 2).

The locations of some of the historical and existing operations are shown on Figure 2. Detailed depictions of historical operations are also illustrated on the 1885 through 1959 Sanborn Maps contained in Appendix C. Raw materials and waste products generated from these operations are summarized on Tables 1A and 1B.

2.5 CURRENT PROPERTY USE

The Subject Property's current operations include the idled 36-inch Galvanizing Line, 48- and 60-inch Galvanizing Lines and corresponding product Branding process, the idled Temper Mill, the Roof Shop operated by subsidiary Wheeling Corrugated Company, the Machine Shop, Maintenance/Electrical Shop, Boiler House, Paint Shop, and WWTP. Each of the Subject Property's current operations is summarized on Table 1A.

3.0 ENVIRONMENTAL HISTORY AND COMPLIANCE REVIEW

3.1 INTERVIEW WITH KEY EMPLOYEES AND FACILITY FILE REVIEW

As discussed in Section 2.3, CEC performed a review of SWI's files and conducted an interview with Mr. Pat Smith of SWI to determine historical operations at the Subject Property and to inquire about his knowledge of outstanding regulatory issues or historical releases of hazardous substances or petroleum products to the environment.

Based on the file review and interview, targeted environmental studies have been previously conducted at specific areas of the Subject Property related to the release of hazardous substances or petroleum products to the environment. These documents are discussed in detail below and/or in subsequent sections of this report as they relate to Identified Areas (IA) as determined by CEC or preliminary U.S. EPA identified SWMUs or AOCs.

Documents related to historical releases of hazardous substances or petroleum products to the environment, environmental permits, and regulatory compliance were also identified in SWI's files and discussed with SWI personnel. The number of records reviewed precludes a comprehensive list and discussion of each; however, a summary of pertinent information obtained is as follows.

Environmental Incidents File – A number of incidents were recorded in regards to releases or threats of releases due to improper storage practices for hazardous substances and/or petroleum products. Most of the actual release incidents relate to surface water discharges which have been resolved and do not remain a concern related to onsite contamination. Releases to the ground surface were also identified and mostly include oil, acid, alkali, and chromate solution. Files also indicate that most of these releases were quickly resolved through containment and collecting/disposing of spilled material and impacted soil. Areas where potentially recurring releases to the ground surface are noted include oil, chromate solution, acid and alkali at the

former drum storage area near the Oil House, and oil in the area immediately adjacent to the Oil Storage Shed. Liquid material releases or the threat of releases due to improper storage practices including acid, alkali, chromate solution, and zinc ammonium chloride are noted at the Galvanizing Line batch tanks, overhead acid tanks at the southeast corner of the facility, overhead zinc ammonium chloride tank near the baghouse dust collector, and container storage/handling areas north of the Galvanizing Lines. Many of the areas where a pattern of improper storage practices existed are identified by U.S. EPA on the preliminary list of SWMUs and AOCs. Others are identified by CEC through completion of this Phase I Assessment as IAs.

Water Discharge Permits – The Subject Property manages and discharges storm water and treated wastewater from the WWTP under NPDES Permit No. OH0011339 which is effective through **January 31, 2009**. Pursuant to the NPDES Permit, a Storm Water Pollution Prevention Plan (SWPPP) was prepared in August 2004. The SWPPP provides an inventory of potential storm water pollution sources with corresponding best management practices to prevent storm water pollution, a recent history of spills and leaks, discharge monitoring requirements, compliance evaluation requirements, and personnel responsibilities and training requirements. While there are limited occurrences of reportable spills at the Subject Property, the potential storm water pollution sources provided in the SWPPP are consistent with those areas identified in SWI and regulatory file reviews. Historical spills and leaks have also led to a number of discharge violations. Documents related to the history of NPDES violations at the Subject Property were reviewed and correspond to the potential storm water pollution sources including pH (due to acid or alkali releases), zinc, and oil and grease effluent violations. While historical violations of NPDES discharge requirements indicates a need to improve past material handling practices, the violation itself does not relate to contamination of onsite media, as the discharges occurred as liquid releases to the Ohio River.

Hazardous Waste – A Hazardous Waste Generator Contingency Plan for the Subject Property (EPA Large Quantity Generator Facility ID No. OHD 010 448 231) was prepared in December 2001 in accordance with Ohio Hazardous Waste Regulations and the Code of Federal Regulations Title 40, Part 365. The purpose of the plan is to provide necessary information for

effective hazardous waste related emergency response. The plan also lists hazardous wastes generated at the Subject Property as D007 Waste (Chem Treat Wastes), D002 Waste (Alkali and Acid Wastes), D001 Waste (Paint/Ink Wastes) and spent parts washer solvent upon removal from recirculation stations.

D007, D002, and D001 wastes are generated at the Galvanizing Lines. Parts washer solvent is generated at the Machine Shop, Boiler House, Roof Shop, and Maintenance/Electrical Shop. Chem Treat Wastes are stored in a lined and tarp covered roll-off container north of the Galvanizing Lines. Alkali and acid waste water is treated onsite at the WWTP. Alkali and acid wastes generated from cleanup of spills such as absorbent materials are placed into bags and stored at the acid/alkali waste storage area north of the Galvanizing Lines. Paint/ink wastes are stored in drums near the 48- and 60-inch Galvanizing Line Branding Operations. Spent solvents and paint/ink wastes are both disposed of as necessary by Safety Kleen. There was no note of past spills or releases of these materials in the plan; however, reviewed files and the site inspection identified a number of areas where potential impacts from hazardous substances exist. These areas are described in Section 6 of this report.

Air Permit – Title V Air Emissions Control Permit No. 06-07-09-0013* was issued July 20, 2005. This permit currently covers emissions from the baghouse dust collector for the zinc ammonium chloride flux process at the Galvanizing Lines, and fugitive dust emissions from the Subject Property's roadways. **Any scrubbers or other emission sources covered by the Title V permit?**

SPCC Plan – An SPCC Plan was recently prepared for the facility in 2006. Petroleum containing structures addressed in the plan include 29 above ground storage tanks (ASTs) (≥ 250 gallon capacity) and 5 small container storage locations, auxiliary hydraulic oil reservoirs for various onsite equipment, transformers, and bulk loading/unloading stations. Information obtained from Mr. Pat Smith and SWI files indicate polychlorinated biphenyl (PCB) containing equipment has been removed from the Subject Property. In addition, the SPCC Plan identified no reportable spills at the Subject Property for a period of 10 years prior to the Plan's preparation

in 2006. Information obtained from file reviews, interviews, and observations during the site inspection was used to determine whether oil storage and handling at each location represented an IA. The IAs described in Section 6 of this report indicate where evidence of potential or known releases exists from oil storage and/or handling throughout the Subject Property.

3.2 FEDERAL AND STATE ENVIRONMENTAL RECORDS

An inquiry of current and past environmental issues and compliance histories of the Subject Property and surrounding properties was performed. The inquiry consisted of:

- File reviews and information requests at several State and Federal regulatory agencies; and
- Use of an independent service, Environmental Data Resources, Inc. (EDR), to conduct a search of available state and federal environmental databases for the Subject Property and surrounding areas (search distances were in accordance with those specified in the VAP regulations). The EDR report is attached in Appendix B.

3.2.1 Regulatory File Review

A file review was conducted at the Ohio EPA Southeast District Office (SEDO) located in Logan, Ohio, and files related to the Subject Property were obtained from the Ohio Bureau of Underground Storage Tank Regulations (BUSTR) office located in Reynoldsburg, the Ohio Department of Natural Resources (ODNR) office in Columbus, and the U.S. EPA Region 5 office. The information obtained was generally consistent with the information obtained during the review of SWI's files. Information that supplemented the information contained in SWI's files is summarized below.

Documents reviewed at the Ohio EPA SEDO largely corresponded to those files contained within SWI's files for the Subject Property. Additional documents include numerous correspondence letters and meeting minutes/presentations related to negotiated settlements between SWI and the various regulatory agencies for a history of releases and violations. Files referencing specific releases, spills, and violations directly correlate to those areas identified by U.S. EPA as preliminary SWMUs and AOCs as well as IAs identified through completion of this Phase I assessment.

The file review staff at BUSTR stated in electronic communication that BUSTR records indicate four underground storage tanks (USTs) have been removed from the Subject Property and no further action (NFA) status has been obtained for each UST. There are currently no known USTs present at the Subject Property. However, releases to subsurface soil have been documented from two of four previously existing USTs and both of these releases also resulted in impacts to groundwater. Twenty-two groundwater monitoring wells were installed to characterize and monitor the extent of contamination resulting from UST Release Number 07000179-N00002. According to letters dated May 29, 1996 and July 10, 2009 from BUSTR representatives, corrective action related to soil and/or groundwater contamination at each of the two UST locations has been completed as documented by the NFA status assigned by BUSTR. Information obtained from BUSTR files, including the closure of four USTs, corrective action in response to releases from two of the four USTs, and NFA status approval, is included in Appendix G.

Historical records for three oil/gas wells at the Subject Property were obtained from ODNR and included in Appendix H. Records of well decommissioning are only available for one of the oil/gas wells. According to SWI personnel, there are no groundwater wells currently used as a source of process water at the Subject Property. BUD IS THIS TRUE?

The U.S. EPA information request did not reveal additional information beyond that available in SWI and Ohio EPA files.

3.2.2 Environmental Database Search

The EDR environmental database search provides a summary of regulatory file records present for the Subject Property and surrounding properties within prescribed search radii. The complete database search conducted by EDR is presented in Appendix B and identifies the list of databases reviewed and their respective search radii from the Subject Property.

As expected, the EDR search revealed incidents related to the Subject Property which is consistent with information obtained during reviews of SWI and regulatory agency files. The EDR search uncovered 7 regulatory file records for the Subject Property. These records were limited to five federal and nine state database systems. The majority of the records (4 total) were contained in the OH SPILLS database. Files contained in this database include incidents reported to the Emergency Response (ER) Unit of the Ohio EPA. The focus of the ER program is to minimize the impact on the environment from accidental releases, spills, and unauthorized discharges from any fixed or mobile sources. Incidents involving petroleum products, hazardous materials, hazardous waste, abandoned drums, or other materials which may pose as a pollution threat to the water, land, or air in the state of Ohio are to be reported immediately. Not all incidents included in the database are actual spills, they may simply be reported incidents. No violations were reported in the OH SPILLS regulatory file records for the Subject Property.

Of the remaining record files for the Subject Property, several violations occurred under the facility's status as a RCRA Large Quantity Generator and TSD Facility. The reported violations appear to involve record keeping and routine site maintenance and procedures. No major corrective or enforcement actions appear under this record in the EDR report. Several additional violations are noted under the Federal Integrated Compliance Information System (ICIS) database, mainly for violations of the facility's Title V and NPDES Permit as well as reporting obligations under the U.S. EPA Toxics Release Inventory System. Details of the ICIS database violations are not reported. Finally, two records of Leaking Underground Storage Tanks (LUST) are noted, with No Further Action status obtained for each.

Several facilities/incidents were identified within ½-mile radius of the Subject Property which have the potential for releases to the environment. Each of these facilities is identified on the attached Figure 4. Based on the distance of each identified offsite property from the Subject Property and/or position from the subject property relative to anticipated groundwater flow direction, none of the identified offsite properties is characterized as an IA. In addition, relative to the IAs identified at the Subject Property and additional investigation recommended to evaluate these areas, the potential for impacts to the Subject Property from the identified offsite properties is expected to be negligible.

Additional facilities were identified by EDR with inadequate address information for mapping purposes. Except for those records incorrectly listed as unmapped sites which appear to be related to the Subject Property, the identified unmapped sites were not observed directly adjacent to the Subject Property during the site reconnaissance.

3.3 ADDITIONAL SOURCES OF INFORMATION

In addition to the file reviews and interviews discussed above, CEC contacted several local officials to discuss the environmental history of the Subject Property. The persons that were contacted included the following:

- Mr. Michael Freeman – Director of Environmental Health, Belmont County Health Department;
- Ms. Cindy Stanwick – Ohio Environmental Protection Agency, Division of Emergency and Remedial Response; and
- Ms. Nancy Caldwell – Records Management Officer, State of Ohio.

Mr. Freeman stated that to his knowledge, he was not aware of any specific incidents, regulatory issues, or spills or releases of hazardous materials or petroleum products at the Subject Property. Ms. Stanwick provided a list of incidences that occurred at the subject property. Of the list that was provided, only one incident was investigated. A fire at the Subject Property occurred on December 17, 2002. The Martins Ferry Fire Department reported along with OSC, the OEPA, and Pat Smith (Environmental Manager at SWI). The detailed incident report is presented in Appendix F. Ms. Caldwell supplied us with the same public records that had previously been obtained from BUSTR documents, the OEPA file review performed by CEC, and SWI files. Documentation regarding these contacts is presented in Appendix F.

3.4 COMPLIANCE ISSUES

Based on the file reviews and interviews with SWI personnel, current operations which could result in contamination of onsite media appear to be in compliance with corresponding environmental permits issued for the Subject Property. However, historical violations have occurred throughout the Subject Property's history, which have resulted in substantial negotiations between SWI and various regulatory agencies. Currently, the Subject Property's environmental concerns identified by U.S. EPA's preliminary list of SWMUs and AOCs are being addressed by SWI through Ohio's VAP process for voluntary assessment and remedial action. This Phase I Assessment is the initial step in that process. In addition to concerns identified by U.S. EPA's preliminary list of SWMUs and AOCs, IAs uncovered by CEC through completion of the file reviews, interviews, and site inspection activities described herein will be addressed through the Ohio VAP process.

3.5 RELEASE EVALUATION

Based on the interviews and file reviews, there have been a number of documented spills and releases of hazardous materials and petroleum products at the Subject Property. Most documented releases have been to the Subject Property's storm sewer system or breaches of the Subject Property's WWTP, which resulted in releases to the Ohio River as well as violations of

the Subject Property's NPDES permit. Releases to soil have also occurred or are suspected to have occurred, mostly as a result of acid and alkali spills, chromate solution spills, or handling of used oil and spent liquid wastes. Many areas where releases are suspected to have occurred are included on U.S. EPA's preliminary list of SWMUs and AOCs. Information obtained from interviews with SWI personnel as well as observations of Subject Property conditions at the time of the site inspection was used to determine whether these areas constitute IAs warranting further investigation. In most instances, IAs correlate to the U.S. EPA preliminary list of SWMUs and AOCs. Additional areas not included on the U.S. EPA preliminary list of SWMUs and AOCs were also identified by CEC. Each IA is discussed in Section 6 of this report, is summarized on Table 2, and illustrated on Figure 3.

The location of oil storage tanks, containers, and transformers, as well as bulk loading and unloading stations, is well documented by the facility SPCC Plan dated November 2006. Information obtained from file reviews, interviews, and observations during the site inspection was used to determine whether oil storage and handling at each location represented an IA. The IAs described in Section 6 of this report indicate where evidence of potential or known releases exists from oil storage and/or handling throughout the Subject Property.

Finally, releases to subsurface soil and groundwater have been documented from two of four previously removed USTs. As detailed in Section 3.1, corrective action has been completed and NFA status has been obtained for each UST.

4.0 SITE INSPECTION

4.1 INSPECTION OBSERVATIONS

An inspection of the Subject Property and immediately surrounding area was conducted by Mr. Rob Dlugos of CEC in February 2008 and on July 7, 2009. Mr. Dlugos was accompanied by Mr. Patrick Smith of SWI's Environmental Control Department. Photographs taken during the Subject Property inspection are presented in Appendix E with locations of photographs documented on Figure 5. Features observed during the Subject Property inspection are shown on Figure 2 while IAs are designated on Figure 3.

Active primary operations at the Subject Property observed during the site inspection included the 60-inch and 48-inch Galvanizing Lines and related Branding operations and the Roof Shop. Support functions included operations at the Machine Shop, Maintenance/Electrical Shop, Boiler House, and WWTP. In general, buildings and structures on the Subject Property were somewhat deteriorated but functional condition. Buildings associated with the former No. 1 Mill were demolished prior to the site inspection as only concrete floors and building foundations remain. Utilities servicing the Subject Property include electrical power, natural gas, public water, and sanitary sewage. Process wastewater generated onsite is directed to the WWTP. Finally, storm sewers located throughout the site transport storm water runoff to one of the Subject Property's NPDES storm water outfalls.

As discussed in Section 1.2, the topography of the Subject Property is generally flat to gently sloping, with ground surface elevations varying only a few feet, creating a very gentle slope to the east in the direction of the Ohio River. Much of the Subject Property, particularly the western portion where existing and former mill operations are located, is covered with buildings, concrete foundations, or is paved. Slag, gravel, and soil cover exist over much of the eastern portion of the Subject Property. Drop inlets/catch basins are located throughout the Subject

Property that collect onsite storm water and direct it to the facility storm water outfalls via a system of underground sewers.

Several detached structures were identified, including the office building and hospital immediately west of the No. 2 Mill. East of the No. 2 Mill are the Oil Storage Shed, former Oil House, and the WWTP. Remaining buildings at the Subject Property are closely situated to one another or are connected and associated with the existing No. 2 Mill.

The site inspection commenced at the western entrance to the Galvanizing Line area immediately east of the office building (Photograph No. 1, Appendix E). A transformer was observed immediately adjacent to the entrance with oil staining present on the underlying concrete (Photograph No. 2, Appendix E). According to Mr. Pat Smith, PCB-containing equipment has been removed from the Subject Property and remaining transformers contain non-PCB oil. Moving inside, the idled 36-inch and active 48- and 60-inch Galvanizing Lines were observed. Liquid materials handling and storage associated with galvanizing line operations have resulted in U.S. EPA identifying preliminary SWMU Nos. 2 and 17 and AOC No. 6. AOC No. 6 is related to staining beneath the Chem-Treat Process which is being addressed through implementation of a closure plan approved by OEPA. In addition to potential impacts from the handling and storage of liquid acid, alkali, chromate solution, solvent, and paint, in the area of the galvanizing lines, leaks from hydraulic oil tanks and equipment reservoirs into basements beneath the Galvanizing Lines were observed at the time of the site inspection (Photograph Nos. 5, 9, 13, and 18, Appendix E).

Northeast of the 60-inch galvanizing line is an open courtyard area where spent solvent tanks were previously stored and is designated by U.S. EPA as SWMU No. 2. A small shed-type structure was observed with two 55-gallon drums at the time of the site inspection (Photograph No. 14, Appendix E). Immediately inside the adjacent building to the west of this courtyard and north of the 60-inch Galvanizing Line is a tote storage area for alkali and chromate solution (Photograph No. 16, Appendix E). This area is also included as part of SWMU No. 2 as identified by U.S. EPA. At the north end of each Galvanizing Line is the location of the

Branding process where manufacturing information is stamped onto the galvanized sheet steel prior to being coiled and prepared for shipment. Ink and solvent containers were observed in this area (Photograph No. 17, Appendix E). North of the galvanizing and branding process lines is a waste oil storage area (Photograph Nos. 19 and 20, Appendix E).

North and east of the Galvanizing Lines is the idled Temper Mill. Floating oil was observed in the flooded basement of the Temper Mill at the time of the site inspection (Photograph No. 21, Appendix E). North and west of the Galvanizing Lines is the active Roof Shop which has been designated by U.S. EPA as SWMU No. 25 (Photograph Nos. 23, 24, and 25, Appendix E). Oil stains on the concrete floor were observed at the beginning of the active Roof Shop process line.

Proceeding to the southeast corner of the No. 2 Mill, the Oil Storage Shed was observed with several small containers and larger totes of used oil (Photograph No. 26, Appendix E). Surface staining immediately west of the Oil Storage Shed was observed, apparently the result of small oil spills. At the southeast corner of the No. 2 Mill is the location of the former Oil Storage Tank identified by U.S. EPA as SWMU No. 5 (Photograph No. 27, Appendix E). The tank was no longer present at the time of the site inspection and there was no evidence of surface staining or distressed vegetation immediately adjacent to this area. West of the former Oil Storage Tank is the location of two overhead acid tanks (Photograph No. 28, Appendix E). While secondary containment was observed under these tanks, the location has been identified by U.S. EPA as preliminary SWMU No. 4 (Photograph No. 29, Appendix E). North of the overhead acid tanks is the location of the fork lift maintenance shop, designated by U.S. EPA as preliminary SWMU No. 24.

West of the overhead acid tanks is the south end of the Maintenance/Electrical Shop building. This is the location where repairs and maintenance of mechanical and electrical equipment is completed. West of the Maintenance/Electrical Shop is the Machine Shop. Materials used within the Maintenance/Electrical Shop and Machine Shop include kerosene, gear oil, hydraulic oil, motor oil, antifreeze, and cleaning solvents. Oils and antifreeze, both raw product and spent fluids, were observed in drums throughout both buildings (Photograph Nos. 31 and 33,

Appendix E). Used oils are collected in the used oil storage area north of the Galvanizing Lines until picked up for offsite recycling by a licensed vendor. Used antifreeze is disposed of offsite by a licensed vendor. Solvents are used in a recirculating parts washer station with periodic disposal of spent solvent completed by Safety Kleen (Photograph Nos. 32, 34, and 35 Appendix E). According to SWI personnel, these practices have been implemented for as long as they have been familiar with onsite operations and they are unaware of improper disposal practices in the past. Other than small stains on the concrete floor inside the buildings, there were no obvious surficial signs of spills or releases noted during the site inspection.

West of the Machine Shop and east of the entrance to the 60-inch Galvanizing Line is the Boiler House (Photograph No. 36, Appendix E). A recirculating parts washer station with periodic disposal of spent solvent completed by Safety Kleen was observed in the Boiler House (Photograph No. 37, Appendix E). Onsite boilers were previously coal fired with coal storage previously located south of the Boiler House building. The location of the former coal storage area adjacent to the Boiler House and an additional coal storage pile near the Ohio River was identified by U.S. EPA as SWMU No. 21. However, files obtained from OEPA and SWI indicate concerns related to remnant coal exposed at these areas were previously addressed by removing the coal. Onsite boilers were converted to natural gas as the fuel source in 1992. Historic records reviewed as part of this assessment also indicate the Subject Property has been serviced by natural gas since the late 19th to early 20th century.

East of the No. 2 Mill is the location of the former Oil House (Photograph Nos. 38 and 40, Appendix E). Other than small oil spills inside the Oil House building, there was no surficial evidence of recent spills or releases at the time of the site inspection. However, the Oil House and adjacent former drum storage area at the south end of the Oil House is identified by U.S. EPA as SWMU No. 9. According to Mr. Pat Smith, oil and other liquid materials such as alkali, chromate solution, and acid were handled and stored in this area.

Between the Oil House and the No. 2 Mill is the location of waste zinc dross storage which is included as part of U.S. EPA's designated SWMU No. 2. Open metal containers were observed with zinc dross also observed on the surrounding ground surface (Photograph No. 39, Appendix E). Immediately east of the zinc dross storage area is the location of the former waste acid, alkali, and sludge loading area (Photograph No. 41, Appendix E). While there was no evidence of surface staining or distressed vegetation at the time of the site inspection, this area has been identified by U.S. EPA as SWMU Nos. 11 and 12. East of the loading area is an area of higher elevation which is identified by U.S. EPA as SWMU No. 20 (Photograph No. 36, Appendix E). According to Mr. Pat Smith, due to the higher elevation of the area, it was used by SWI personnel in the past for temporary storage of liquid material containers during flood events. While there were areas of sparse vegetation, apparently the result of slag fill used in the area, there did not appear to be evidence of recent spills or releases to the ground surface.

Southwest of this temporary storage area is the location of the No. 2 Mill WWTP which has been identified by U.S. EPA as SWMU No. 3. Materials stored and handled at the WWTP include lime, polymers, acid, and formerly caustics. Files reviewed as part of this assessment indicate the WWTP's designation as a SWMU is related to breaches of the system during extreme rainfall/flooding events and improper material storage practices which were corrected shortly thereafter. There were no signs of improper storage, handling, or releases to the ground surface at the time of the site inspection.

The final area of note identified during the site inspection is the former No. 1 Mill, which has been identified by U.S. EPA as SWMU No. 1. As indicated previously, buildings associated with the former No. 1 Mill have been demolished and only concrete floors and building foundations remain. Consequently, historical drawings indicating the location of past practices where material handling and storage could lead to potential impacts to soil and/or groundwater were used to identify areas for further assessment.

4.2 EVIDENCE OF ADJOINING PROPERTY USE THAT MAY HAVE RESULTED IN RELEASES TO THE PROPERTY

Offsite properties with the potential for environmental contamination within 1/2-mile radius of the Subject Property were identified by EDR and are shown on Figure 4. The potential for impacts to the Subject Property from these offsite properties is expected to be negligible based on their distance and/or estimated hydrogeologic position relative to the Subject Property.

4.3 MIGRATION CONDUITS FOR HAZARDOUS SUBSTANCES OR PETROLEUM AND PHYSICAL OBSTRUCTIONS

Underground water lines, sanitary sewer lines, and storm/process water sewer lines and related manholes are known to exist on the Subject Property. The groundwater monitoring wells associated with the former UST (see Section 3.2.1) were observed during the site inspection. In addition, historical records for three oil/gas wells were obtained from ODNR. Records of well decommissioning are only available for one of the oil/gas wells and none of the groundwater wells.

The approximate location of the onsite oil/gas wells were provided by ODNR and are included in Appendix H. The twenty-two groundwater monitoring wells installed to characterize and monitor the extent of contamination resulting from UST Release Number 07000179-N00002 are located in the vicinity of the former No. 1 Mill. The presence of wells which have not been properly decommissioned could provide a conduit for contaminants to migrate into the subsurface.

4.4 CONDITIONS LIMITING VISIBILITY

Buildings, pavement, or gravel/slag cover a majority of the Subject Property, which limited direct observation of soils. In addition, the basement of the Temper Mill could not be thoroughly

inspected as it has been flooded. An undetermined amount of hydraulic fluid was observed on the water flooding the Temper Mill basement.

4.5 CONCLUSIONS

In addition to IAs identified through an extensive file review by CEC as well as by U.S. EPA through development of the preliminary list of SWMUs, the site inspection uncovered evidence of additional potential sources of contamination that are considered IAs. A discussion of these IAs is included in Section 6 of this report. The IAs are also summarized on Table 2 and illustrated on Figure 3.

5.0 HAZARDOUS SUBSTANCES AND PETROLEUM RELEASES

Based on a review of available information as well as the site inspection, evidence of hazardous substances and/or petroleum releases or the potential for historical releases exist for the Subject Property. Many of the U.S. EPA identified preliminary SWMUs and AOCs were confirmed as IAs. Evidence of additional potential releases was also observed by CEC, as previously noted. Each of the IAs where further investigation is warranted is discussed in more detail in the following Section 6.0 and is identified on Figure 3.

Finally, offsite regulatory-listed properties located within 1/2-mile of the Subject Property are identified on Figure 4. The potential for environmental impact to the Subject Property from these properties is believed to be low based on their distance and/or estimated hydrogeologic position relative to the Subject Property.

6.0 IDENTIFIED AREAS

Areas of the site that have been identified as having the potential for historical releases to soil or groundwater, and where further investigation is recommended, are discussed below. A summary of these IAs and related chemicals of concern is presented on Table 2. The location of these areas is shown on Figure 3.

- IA-1. Container Storage Area – Liquid material containers were reportedly stored in the area between the WWTP and the Ohio River during a flood event due to the area's higher elevation relative to the remaining portions of the Subject Property. The area is identified as preliminary SWMU No. 20 by U.S. EPA based on OEPA observations of leaking containers during a routine facility inspection on October 22, 1997.
- IA-2. Acid/Alkali Waste/Sludge Loading and Unloading Area – Slightly northwest of the Container Storage Area noted in IA-1 is a WWTP sludge loading and waste acid and alkali container storage area. While evidence of past releases was not observed during the site inspection, this area was identified by U.S. EPA as preliminary SWMU Nos. 11 and 12.
- IA-3. Oil Storage Shed – The historical handling and storage of new and used oil containers warrant this area's inclusion as an IA. In addition, oil stained soil was noted immediately adjacent to the Storage Shed at the time of the site inspection. Similar observations by OEPA personnel during a November 2001 facility inspection are noted in the area's designation by U.S. EPA as preliminary SWMU No. 23.
- IA-4. Location of Former Used Oil Storage Tank – At the southeast corner of the No. 2 Mill, an overhead storage tank was previously used to store used oil. While SWI personnel did not recall past releases from the tank, the potential for historical

releases during loading/unloading operations as well as its identification by U.S. EPA as SWMU No. 5 warrants further investigation as an IA.

- IA-5. Hydrochloric Acid Tanks – Immediately adjacent to the former Used Oil Storage Tank at the southeast corner of the No. 2 Mill, overhead storage tanks were used to store spent hydrochloric acid. While SWI personnel did not recall past releases from the tanks, the historical use of the location for acid storage as well as its identification by U.S. EPA as SWMU No. 4 warrants further investigation as an IA.
- IA-6. Galvanizing Lines – The facility's three Galvanizing Lines are rolling mills with hydraulic systems and batch tanks used to store acids, alkalis, zinc ammonium chloride, and chromate solution. The chromate "Chem Treat Area" on the 48-inch Line has been addressed in accordance with a closure plan approved by OEPA. However, leaks from the various batch tanks and hydraulic systems to the basements of the Galvanizing Lines may have resulted in subsurface impacts to soil and/or groundwater. The Chem-Treat waste accumulation area and satellite accumulation areas associated with each galvanizing line are identified by U.S. EPA as SWMU No. 17.
- IA-7. Transformers – Three electrical transformers and two oil filled circuit breakers were observed on the west side of the No. 2 Mill. While PCB equipment has been replaced throughout the subject property, oil stained concrete near one of the three transformers was noted during the site inspection. Due to the potential the oil staining was caused by an older PCB-containing transformer prior to being replaced, the location is noted as an IA.
- IA-8. Zinc Ammonium Chloride Tank and Baghouse Dust Area – Liquid zinc ammonium chloride and the flux waste product (dust) are stored adjacent to the galvanizing lines on the west side of No. 2 Mill. Historical documentation

indicates potential releases due to improper storage and handling at the Baghouse Dust Area and spill prevention/secondary containment deficiencies have been noted for the Zinc Ammonium Chloride Tank. Consequently, the Zinc Ammonium Chloride Tank has been designated by U.S. EPA as preliminary SWMU No. 6 and the Baghouse Dust collector as A.O.C. No. 3.

- IA-9. Paint/Solvent Waste Storage Area – The paint and solvent waste storage area, which is located northeast (at the end) of the galvanizing lines has been identified by U.S. EPA as preliminary SWMU No. 2. Due to the potential for historical releases from past material handling practices, the area warrants further investigation.
- IA-10. Zinc Waste Storage Area – The Zinc Waste Storage Area is located on the east side of the No. 2 Mill. Open carts with zinc waste from the molten galvanizing process are stored in this area. Visible evidence of zinc waste on the ground surface was observed at the time of the site inspection. In addition, this area is included in U.S. EPA's preliminary list of SWMU's as a general concern for the entire No. 2 Mill, designated as SWMU No. 2.
- IA-11. Oil House – The historical handling and storage of petroleum and other liquid products including alkali, acid, and chromate solution warrant this area's inclusion as an IA. In addition, the area is identified by U.S. EPA as preliminary SWMU Nos. 9 and 13 due to its use as an Oil House and drum storage facility.
- IA-12. Roof Sheet Painting – Historical painting operations for the Roof Shop are designated on Sanborn Maps at the southwest portion of the Roof Shop building. Due to the potential for releases of paints and solvents/thinners during these historical operations, the area should be investigated further.

- IA-13. No. 1 Mill – Ware Galvanizing/Tub and Bucket Department – The former No. 1 Mill was completely demolished at the time of the site inspection with only remnants of concrete floors/foundations visible at the surface. However, the galvanizing operation for the tub/bucket department of the former No. 1 Mill operation is included as an IA due to the potential for historical releases of zinc and chromate solution.
- IA-14. No. 1 Mill – Machine Shop – Historical handling, storage, and use of kerosene, gear oil, hydraulic oil, motor oil, antifreeze, and cleaning solvents, which are typical for an industrial machine shop, warrant the designation of this area as an IA.
- IA-15. No. 1 Mill – Electrical Shop – Historical handling, storage, and use of lubricants, cleaning solvents, and paints during past operations warrant the designation of this area as an IA.
- IA-16. No. 1 Mill – Oil House – While there were no obvious surficial signs of spills or releases noted during the site inspection, the former No. 1 Mill Oil House is included as an IA due to the potential for oil releases during past storage and handling activities.
- IA-17. No. 1 Mill – Pickling – The former No. 1 Mill's pickle rinse tanks are identified by U.S. EPA as preliminary SWMU No. 1. The potential release of pickling solution and related wastewater during past operations warrants additional investigation.
- IA-18. No. 1 Mill – Electroplating – Potential releases during historical storage, handling, and application of electrolyte solution at the former No. 1 Mill electroplating operation warrant additional investigation.

- IA-19. No. 1 Mill – Culvert Dip Galvanizing – The galvanizing of culverts by batch tank dip process at the former No. 1 Mill is included as an IA due to the potential for impacts related to zinc and chromate solution releases.
- IA-20. Paint Shop – The No. 2 Mill's Paint Shop is located on the east side of the plant and is included as an IA due to historical painting and paint/solvent storage and handling conducted at this building.
- IA-21. Temper Mill – Oil releases from equipment hydraulics at the Temper Mill were identified in the flooded Temper Mill basement.
- IA-22. Branding – Current and historical paint and solvent storage, handling, and application to galvanized steel product at the end of each galvanizing line is a potential source of contamination that warrants further investigation.
- IA-23. Machine Shop – While there was no evidence of improper handling and storage of liquid materials at the time of the site inspection, historical handling, storage, and use of kerosene, gear oil, hydraulic oil, motor oil, antifreeze, and cleaning solvents, which are typical for an industrial machine shop, warrant further investigation.
- IA-24. Maintenance/Electrical Shop – Similar to the machine shop, there was no evidence of improper handling and storage of liquid materials at the time of the site inspection. However, historical handling, storage, and use of lubricants, cleaning solvents, and paints warrant further investigation.
- IA-25. Forklift Maintenance Shop – While there was no evidence of improper handling and storage of liquid materials at the time of the site inspection, historical handling, storage, and use of gear oil, hydraulic oil, motor oil, antifreeze, and

cleaning solvents warrant further investigation. This area is also identified by U.S. EPA as preliminary SWMU No. 24.

7.0 DE MINIMIS AREAS

No *de minimis* areas were identified in this Phase I Property Assessment.

8.0 REFERENCES

The following reference documents were used in preparation of this report:

1. Certified Sanborn Map Report, Severstal Wheeling – Martins Ferry Plant, Map dates: 1885, 1895, 1900, 1908, 1915, 1924, 1959, Environmental Data Resources, Inc., Inquiry Number: 2610567.3, October 9, 2009.
2. The EDR Aerial Photo Decade Package, Severstal Wheeling – Martins Ferry Plant, Aerial Photograph dates: 1959, 1976, 1982, 1991, 1997, 2005, 2006, Environmental Data Resources, Inc., Inquiry Number: 2610567.5, October 14, 2009.
3. The EDR Historical Topographic Map Report, Severstal Wheeling – Martins Ferry Plant, Map dates: Steubenville Quad – 1902, 1942, 1956, 1968, 1978, 1984, 1992, 1994, Environmental Data Resources, Inc., Inquiry Number: 2610567.4, October 9, 2009.
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8. Laughlin Nail Company – The Laughlin Mill, Another Brilliant Example of the Sagacity of Wheeling Men, Wheeling Daily Intelligencer, September 18, 1886.
9. Personal Communication, Bernard A. Lambie with Ms. Nancy Caldwell, Records Management Officer, State of Ohio, September 2009.
10. Personal Communication, Bernard A. Lambie with Mr. Michael Freeman, Director of Environmental Health, Belmont County Health Department, September 2009.
11. Personal Communication, Bernard A. Lambie with Ms. Cindy Stanwick, Ohio Environmental Protection Agency, Division of Emergency and Remedial Response, October 2009.
12. Personal Communication, Robert C. Dlugos with Patrick Smith of SWI – Environmental Control, July 2009 through April 2010.
13. Severstal Completes Acquisition of Esmark Incorporated, http://www.severstalna.com/images/stories/pressreleases/esmark_closing.pdf, August 5, 2008.
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15. Wheeling Steel In Steubenville – A Condensed Account of the Corporation's Plant in Steubenville and How it Has Grown With Our History, Curn, William J. Jr., circa 1947, Reproduced by Closseon Press, Apollo, PA, 1992.

TABLES

TABLE 1B
SUMMARY OF HISTORICAL OPERATIONS, RAW MATERIALS, AND WASTE PRODUCTS
SEVERSTAL WHEELING - MARTINS FERRY PLANT
MARTINS FERRY, BELMONT COUNTY, OHIO

Operation	Description	Raw Materials	How Material Stored?	Waste Products	How Waste Managed?	Known or Suspected Release
No. 1 Mill Annealing	Slow heat treatment of steel	Lumpy coal or natural gas fired as so yellow coars gas was used at Martins Ferry Plant	Unknown	Coal combustion ash	Unknown	Unknown
No. 1 Mill Galvanizing - TubBuck	A batch tank dip process, not a rolling mill	Zinc, Chromate solution	Unknown	Spent solutions from batch tanks and HCl preservative	Unknown	Unknown
No. 1 Mill Pickling	A batch tank dip process, not a rolling mill	HCl	Unknown	Spent HCl from batch tanks	Unknown	Unknown
No. 1 Mill Roof Sheet Painting	Painting roofing sheet metal	Paint, possibly solvent/paint thinners	Unknown	Spent solvent/thinner, unused paint	Unknown	Unknown
No. 1 Mill Machine Shop	Mechanical machine shop for No. 1 Mill	Fuels, oils, degreasers, solvents	Unknown	Spent petroleum products and solvents	Unknown	Unknown
No. 1 Mill Electroplating	Electrical plating of steel product	Electrolyte solution	Unknown	Spent electrolyte solution	Unknown	Unknown
No. 1 Mill Oil House	Virgin and/or spent oil storage/handling	Virgin oil	Unknown	Used oil	Unknown	Unknown
No. 1 Mill Electrical Shop	Electric motor repairs	Lubricants, solvents/degreasers, paints and varnishes	Unknown	Spent oil, solvent, waste paint and varnish	Unknown	Unknown
Oil House	Raw liquid materials storage	Oil, chromate solution, solvents	Drums, drums and totes	None - only raw material storage	Not Applicable	Likely small spills when filling totes with oil outside building before moving totes to operating lines
Oil Storage Shed	Used oil storage	Not applicable, used oil storage only	Drums and totes	Used Oil	Accumulated until collected for recycling	Small spills when handling containers with used oil

TABLE 1B
SUMMARY OF HISTORICAL OPERATIONS, RAW MATERIALS, AND WASTE PRODUCTS
SEVERSTAL WHEELING - MARTINS FERRY PLANT
MARTINS FERRY, BELMONT COUNTY, OHIO

Operation	Description	Raw Materials	How Material Stored?	Waste Products	How Waste Managed?	Known or Suspected Release
No. 1 Mill Annealing	Slow heat treatment of steel	Likely coal or natural gas fired as so called oven gas was used at Martins Ferry Plant	Unknown	Coal combustion ash	Unknown	Unknown
No. 1 Mill Galvanizing - Two Buckets and Colven	A batch tank dip process, not a rolling mill	Zinc, Chromate solution	Unknown	Spent solutions from batch tanks and HCl pretreatment	Unknown	Unknown
No. 1 Mill Pickling	A batch tank dip process, not a rolling mill	HCl	Unknown	Spent HCl from batch tanks	Unknown	Unknown
No. 1 Mill Roof Sheet Painting	Painting roofing sheet metal	Paints, possibly solvents/paint thinners	Unknown	Spent solvent/thinner, unused paint	Unknown	Unknown
No. 1 Mill Machine Shop	Mechanical machine shop for No. 1 Mill	Fluids, oils, degreasers, coolants	Unknown	Spent petroleum products and solvents	Unknown	Unknown
No. 1 Mill Electroplating	Electrical plating of steel preform	Electrolyte solution	Unknown	Spent electrolyte solution	Unknown	Unknown
No. 1 Mill Oil House	Virgin and/or spent oil storage/handling	Virgin oil	Unknown	Used oil	Unknown	Unknown
No. 1 Mill Electrical Shop	Electric motor repairs	Lubricants, solvents/degreasers, paints and varnishes	Unknown	Spent oil, solvent, waste paint and varnish	Unknown	Unknown
Oil House	Raw liquid materials storage	Oil, chromate solution, solvents	Buckets, drums and totes	None - only raw material storage	Not Applicable	Likely small spills when filling totes with oil outside building before moving tote to operating lines.
Oil Storage Shed	Used oil storage	Not applicable, used oil storage only	Drums and totes	Used Oil	Accumulated until collected for recycling	Small spills when handling containers with used oil.

TABLE 2
IDENTIFIED AREAS AND CONSTITUENTS OF CONCERN
SEVERSTAL WHEELING, INC. - MARTINS FERRY PLANT
MARTINS FERRY, OHIO

Identified Area	Description of Potential Contaminant Sources	Constituents of Concern
1. Container Storage Area	Container storage between the Waste Water Treatment Plant and the Ohio River during flood event	VOCs, SVOCs, TPH
2. Acid/Alkali Waste/Sludge Loading and Unloading Area	Acid and alkali storage/handling and sludge storage area	SVOCs, Metals, pH, TPH
3. Oil Storage Shed	New and used oil container storage area	SVOCs, TPH, Metals
4. Location of Former Oil Storage Tank	Waste oil storage area	SVOCs, TPH, Metals
5. Hydrochloric acid tanks	Hydrochloric acid tanks	Metals, pH
6. Galvanizing Lines	Acid and alkali batch tanks, chromium chemical treatment tank and waste storage, hydraulic oil equipment reservoirs and in basement	SVOCs, Metals, pH, TPH
7. Transformers	Oil staining on concrete under transformers	SVOCs, PCBs, TPH
8. Zinc Ammonium Chloride Tank and Baghouse Dust Area	Zinc ammonium chloride and flux (dust) collected in baghouse	Metals

TABLE 2
IDENTIFIED AREAS AND CONSTITUENTS OF CONCERN
SEVERSTAL WHEELING, INC. – MARTINS FERRY PLANT
MARTINS FERRY, OHIO

Identified Area	Description of Potential Contaminant Sources	Constituents of Concern
9. Paint/Solvent Waste Storage Area	Paint/solvent waste accumulation area	VOCs, SVOCs, TPH
10. Zinc Waste Storage Area	Zinc waste storage	Metals
11. Oil House	Oil, chromate solution, and solvent storage and handling	VOCs, SVOCs, PCBs, Metals, TPH
12. Roof Sheet Painting	Paint, solvents/thinners	VOCs, SVOCs, TPH
13. No. 1 Mill – Ware Galvanizing/ Tub and Bucket Department	Zinc, chromate solution	Metals
14. No. 1 Mill – Machine Shop	Fuels, oils, degreasers/solvents, and coolants	VOCs, SVOCs, PCBs, Metals, TPH
15. No. 1 Mill – Electrical Shop	Lubricants, degreasers/solvents, paints	VOCs, SVOCs, Metals, TPH
16. No. 1 Mill – Oil House	Virgin and used oil	VOCs, SVOCs, PCBs, Metals, TPH

TABLE 2
IDENTIFIED AREAS AND CONSTITUENTS OF CONCERN
SEVERSTAL WHEELING, INC. – MARTINS FERRY PLANT
MARTINS FERRY, OHIO

Identified Area	Description of Potential Contaminant Sources	Constituents of Concern
17. No. 1 Mill - Pickling	Hydrochloric acid	Metals, pH
18. No. 1 Mill - Electroplating	Electrolyte solution	Metals
19. No. 1 Mill – Culvert Dip Galvanizing	Zinc, chromate solution	Metals
20. Paint Shop	Paint and solvent container storage and handling	VOCs, SVOCs, TPH
21. Temper Mill	Hydraulic oil in basement	SVOCs, PCBs, TPH
22. Branding	Paint and solvent storage and handling at 48-and 60-inch lines	VOCs, SVOCs, TPH
23. Machine Shop	Fuels, oils, degreasers/solvents, and coolants	VOCs, SVOCs, PCBs, Metals, TPH

TABLE 2
IDENTIFIED AREAS AND CONSTITUENTS OF CONCERN
SEVERSTAL WHEELING, INC. – MARTINS FERRY PLANT
MARTINS FERRY, OHIO

Identified Area	Description of Potential Contaminant Sources	Constituents of Concern
24. Maintenance/Electrical Shop	Lubricants, degreasers/solvents , paints	VOCs, SVOCs, Metals, TPH
25. Forklift Maintenance Shop	Oil, hydraulic fluid, degreasers/solvents, coolants	VOCs, SVOCs, PCBs, Metals, TPH

Refer to Figure 3 for the location of the "identified areas" listed in this table.

VOC = Volatile Organic Compound
SVOC = Semi-Volatile Organic Compound
PCB = Polychlorinated biphenyl
TPH = Total Petroleum Hydrocarbons

**ALLEGHENY
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GROUND-WATER SAMPLING LOG

Environmental Assessment, Regulatory Compliance, Remediation

<p>Project Name: 4K Martins Ferry Project ID: Water Treatment System Site Location: Martins Ferry, Ohio</p> <p>Weather: cloudy, 82 deg. F</p>	<p>Well ID: 4K-1 Duplicate Sample ID: _____</p> <p>Date: 06/15/15 Time: 1950 hrs Sampler(s): E. Tamburro, B. Hunt</p> <p>Other Personnel: _____</p>																								
<p>Well Specifications</p> <p>Well Construction: PVC Well Diameter: 2-inch Reference Point (RP): Top of PVC well casing Reference Point Elevation: ft. msl Well Depth (RP): 46.1 ft. Depth to Water (RP): 26.37 ft. Height of Water Column: 19.73 ft. Well Casing Volume: 0.16 gal./ft. Total Water Volume in Well: 3.2 gal.</p>	<p>Field Analyses / Observations</p> <p>pH: 6.32 S.U. Specific Conductance: 1860 umhos/cm Temperature: 16.3 deg. C Turbidity: 25 to 35 NTUs NTUs Color: pale grey</p> <p>Other Observations: samples slightly silty at first, then clear _____</p>																								
<p>Well Evacuation / Sampling</p> <p>Volume of Water Evacuated: 55 gal. Date of Well Evacuation: 6/15/15 Time of Well Evacuation: 1100 hrs</p> <p>Evacuation Method: dedicated bailer, 12 VDC pump Sampling Device: 12 VDC pump</p> <p>Comments: _____ _____</p>	<p>Sample Containers / Preservatives / Laboratory Analyses</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; text-align: center;">Container</th> <th style="width: 33%; text-align: center;">Preservative</th> <th style="width: 33%; text-align: center;">Analyses Requested</th> </tr> </thead> <tbody> <tr> <td colspan="3"><u>OEPA Div of Drinking and Groundwater Wellb Parameters</u></td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Container	Preservative	Analyses Requested	<u>OEPA Div of Drinking and Groundwater Wellb Parameters</u>																				
Container	Preservative	Analyses Requested																							
<u>OEPA Div of Drinking and Groundwater Wellb Parameters</u>																									

Remarks: _____

<i>Well Casing Volumes (gal/ft)</i>			
1 1/4" = 0.077	2" = 0.16	3" = 0.37	6" = 1.46
1 1/2" = 0.10	2 1/2" = 0.24	4" = 0.65	8" = 2.61

**ALLEGHENY
ENVIRONMENTAL
SERVICES, INC.**

GROUND-WATER SAMPLING LOG

Environmental Assessment, Regulatory Compliance, Remediation

Project Name: 4K Martins Ferry Project ID: Water Treatment System Site Location: Martins Ferry, Ohio Weather: cloudy, 82 deg. F	<div style="border: 1px solid black; padding: 5px; margin-bottom: 10px;"> Well ID: 4K-2 Duplicate Sample ID: _____ </div> Date: 06/16/15 Time: 1015 hrs Sampler(s): E. Tamburro, B. Hunt Other Personnel: _____																											
Well Specifications Well Construction: PVC Well Diameter: 2-inch Reference Point (RP): Top of PVC well casing Reference Point Elevation: _____ ft. msl Well Depth (RP): 45.8 ft. Depth to Water (RP): 27.71 ft. Height of Water Column: 18.09 ft. Well Casing Volume: 0.16 gal./ft. Total Water Volume in Well: 2.9 gal.	Field Analyses / Observations pH: 5.90 S.U. Specific Conductance: not measured Temperature: 15.1 deg. C Turbidity: not measured Color: pale orange Other Observations: _____ _____																											
Well Evacuation / Sampling Volume of Water Evacuated: 50 gal. Date of Well Evacuation: 6/15/15 Time of Well Evacuation: 1200 hrs Evacuation Method: dedicated bailer, 12 VDC pump Sampling Device: dedicated bailer Comments: water silty after development, let well settle overnight prior to collecting lab samples	Sample Containers / Preservatives / Laboratory Analyses <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; text-align: center;">Container</th> <th style="width: 33%; text-align: center;">Preservative</th> <th style="width: 33%; text-align: center;">Analyses Requested</th> </tr> </thead> <tbody> <tr> <td colspan="3" style="border: none;">OEPA Div of Drinking and Groundwater Well Parameters</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Container	Preservative	Analyses Requested	OEPA Div of Drinking and Groundwater Well Parameters																							
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OEPA Div of Drinking and Groundwater Well Parameters																												

Remarks: _____

<i>Well Casing Volumes (gal/ft)</i>			
1 1/4" = 0.077	2" = 0.16	3" = 0.37	6" = 1.46
1 1/2" = 0.10	2 1/2" = 0.24	4" = 0.65	8" = 2.61

**ALLEGHENY
ENVIRONMENTAL
SERVICES, INC.**

GROUND-WATER SAMPLING LOG

Environmental Assessment, Regulatory Compliance, Remediation

<p>Project Name: 4K Martins Ferry Project ID: Water Treatment System Site Location: Martins Ferry, Ohio</p> <p>Weather: cloudy, 82 deg. F</p>	<p>Well ID: 4K-3 Duplicate Sample ID: _____</p> <p>Date: 06/15/15 Time: 1710 hrs Sampler(s): E. Tamburro, B. Hunt</p> <p>Other Personnel: _____</p>																											
<p>Well Specifications</p> <p>Well Construction: PVC Well Diameter: 2-inch Reference Point (RP): Top of PVC well casing Reference Point Elevation: _____ ft. msl Well Depth (RP): 35.2 ft. Depth to Water (RP): 24.33 ft. Height of Water Column: 10.87 ft. Well Casing Volume: 0.16 gal./ft. Total Water Volume in Well: 1.7 gal.</p>	<p>Field Analyses / Observations</p> <p>pH: 5.96 S.U. Specific Conductance: 1147 umhos/cm Temperature: 14.5 deg. C Turbidity: 3.6 NTUs Color: clear</p> <p>Other Observations: _____ _____</p>																											
<p>Well Evacuation / Sampling</p> <p>Volume of Water Evacuated: 45 gal. Date of Well Evacuation: 6/15/15 Time of Well Evacuation: 1600 hrs</p> <p>Evacuation Method: dedicated bailer, 12 VDC pump Sampling Device: 12 VDC pump</p> <p>Comments: _____ _____</p>	<p>Sample Containers / Preservatives / Laboratory Analyses</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%; text-align: center;">Container</th> <th style="width: 33%; text-align: center;">Preservative</th> <th style="width: 33%; text-align: center;">Analyses Requested</th> </tr> </thead> <tbody> <tr> <td colspan="3">OEPA Div of Drinking and Groundwater Well Parameters</td> </tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>	Container	Preservative	Analyses Requested	OEPA Div of Drinking and Groundwater Well Parameters																							
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OEPA Div of Drinking and Groundwater Well Parameters																												

Remarks: _____

<i>Well Casing Volumes (gal/ft)</i>			
1 1/4" = 0.077	2" = 0.16	3" = 0.37	6" = 1.46
1 1/2" = 0.10	2 1/2" = 0.24	4" = 0.65	8" = 2.61

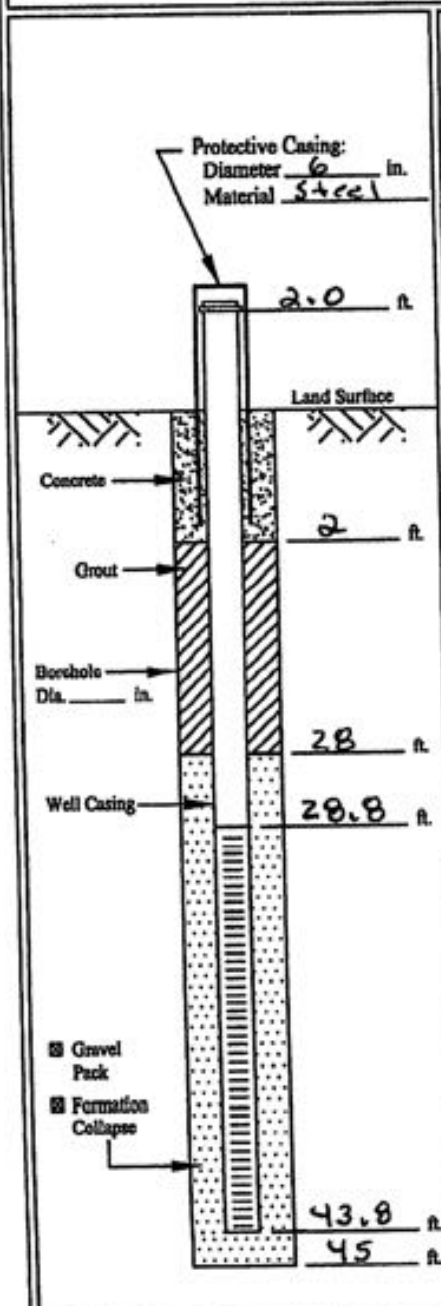
**ALLEGHENY
ENVIRONMENTAL
SERVICES, INC.**

Environmental Assessment, Regulatory Compliance and Remediation

WELL CONSTRUCTION LOG

(Unconsolidated)

PROJECT NAME: 4 K Industrial DATE: 4/23/2015 WELL ID: 4K-2
 PROJECT NUMBER: _____ PERSONNEL: E. TAMBURRO
 SITE LOCATION: Martins Ferry, OH DRILLING CO.: RINDFUSS DRILLING
 (City, State)



Datum Mean Sea Level
 Land Surface Elevation _____ ft.
 Top of Well Casing Elevation _____ ft.
 Well Type/Intended Use Groundwater Monitoring
 Installation Method Hollow Stem Auger
 Water Used None

WELL SPECIFICATIONS

WELL SCREEN		WELL CASING	
Material <u>PVC (Sch 40)</u>	Material <u>PVC (Sch 40)</u>		
Diameter <u>2</u> in.	Diameter <u>2</u> in.		
Slot Size <u>0.020 - inch</u>	Height Above/Below Land Surface <u>2.0</u> ft.		
Installed from <u>28.8</u> to <u>43.8</u> ft.			
FILTER PACK		GROUT	
Manufacturer _____	Type(s) <u>Bentonite: Medium chips</u>		
Type <u>#5 Clean silica</u>	Amount Used <u>- 50 lb. bags</u>		
Amount Used <u>- 50 lb. bags</u>	Depth Interval(s) <u>2 to 28 ft</u>		
Depth Interval <u>28 to 45</u> ft.			

WELL DEVELOPMENT

Date 6/15/2015
 Development Method Bailer, 12VDC Pump Static Water Level 27.71' (PVC)
 Well pumped at NA gpm for — Pumping Water Level NA
 Total Gallons Removed 50
 Specific Capacity NA gal./ft.
 Comments bailed 35 gal
pumped 15 gal (silty)

Other Remarks Ohio River at Flood stage

ALLEGHENY ENVIRONMENTAL SERVICES, INC.

Environmental Assessment, Regulatory Compliance and Remediation

WELL CONSTRUCTION LOG

(Unconsolidated)

PROJECT NAME: 4 K Industrial

DATE: 4/24/2015

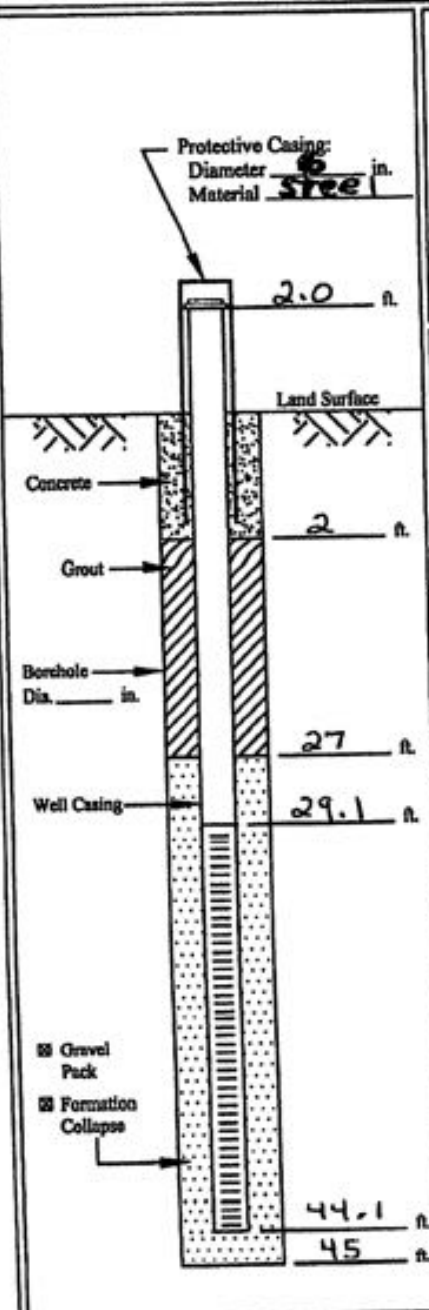
WELL I.D.: 4K-1

PROJECT NUMBER: _____

PERSONNEL: E. Tamburro

SITE LOCATION: Martins Ferry, OH
(City, State)

DRILLING CO.: Rindfuss Drilling



Datum Mean Sea Level

Land Surface Elevation _____ ft.

Top of Well Casing Elevation _____ ft.

Well Type/Intended Use Groundwater Monitoring

Installation Method Hollow Stem Auger

Water Used None

WELL SPECIFICATIONS

WELL SCREEN
Material PVC (Sch 40)
Diameter 2 in.
Slot Size 0.020 - inch
Installed from 29.1 to 44.1 ft.

WELL CASING
Material PVC (Sch 40)
Diameter 2 in.
Height Above/Below Land Surface 2.0 ft.

FILTER PACK
Manufacturer _____
Type #5 Clean silica
Amount Used - 50 lb. bags
Depth Interval 27 to 45 ft.

GROUT
Type(s) Bentonite: Medium chips
Amount Used - 50 lb. bags
Depth Interval(s) 2 to 27 ft.

WELL DEVELOPMENT

Date 6/15/2015

Development Method Bailer / 12VDC

Static Water Level 26.37' (PVC)

PUMP

Pumping

Well pumped at NA gpm for --

Water Level NA

Total Gallons Removed 55

Specific Capacity NA gal./ft.

Comments bailed 35 gal
pumped 20 gal (clear)

Other Remarks Ohio River at Flood Stage

**ALLEGHENY
ENVIRONMENTAL
SERVICES, INC.**

Environmental Assessment, Regulatory Compliance and Remediation

WELL CONSTRUCTION LOG

(Unconsolidated)

PROJECT NAME: 4K Industrial

DATE: 4/23/15

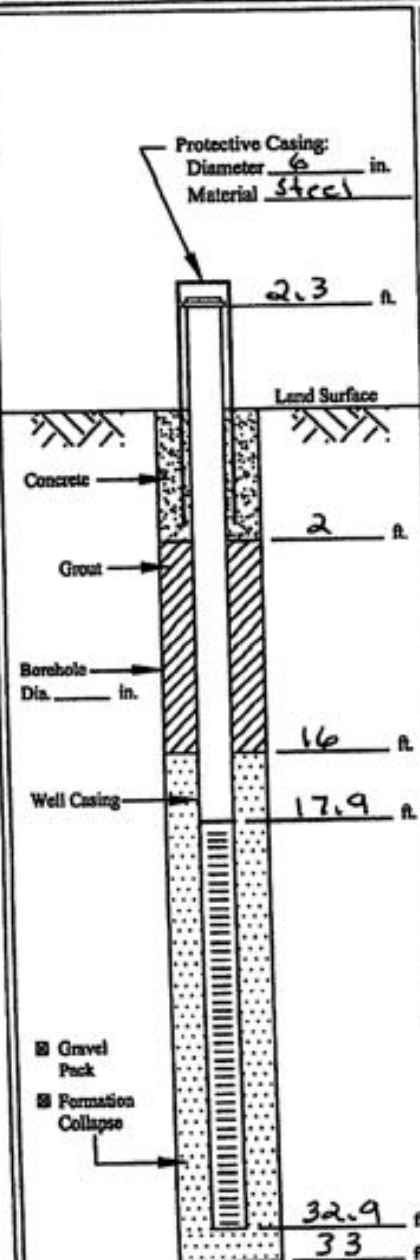
WELL I.D.: 4K-3

PROJECT NUMBER: _____

PERSONNEL: E. Tamburro

SITE LOCATION: Martins Ferry, WV
(City, State)

DRILLING CO.: Rindfuss Drilling



Datum Mean Sea Level

Land Surface Elevation _____ ft.

Top of Well Casing Elevation _____ ft.

Well Type/Intended Use Groundwater Monitoring

Installation Method Hollow Stem Auger

Water Used None

WELL SPECIFICATIONS

WELL SCREEN

Material PVC (Sch 40)

Diameter 2 in.

Slot Size 0.020 - inch

Installed from 17.9 to 32.9 ft.

WELL CASING

Material PVC (Sch 40)

Diameter 2 in.

Height Above/Below
Land Surface 2.3 ft.

FILTER PACK

Manufacturer _____

Type #5 Clean silica

Amount Used - 50 lb. bags

Depth Interval 16 to 33 ft.

GROUT

Type(s) Bentonite: Medium chips

Amount Used - 50 lb. bags

Depth Interval(s) _____

2 to 16 ft.

WELL DEVELOPMENT

Date 6/15/2015

Development Method Bailer

12 VDC PUMP

Static
Water Level 24.33' (PVC)

Pumping

Well pumped at NA gpm for _____

Water Level NA

Total Gallons Removed 45

Specific Capacity NA gal./ft.

Comments bailed 25 gal
pumped 20 gal (clear)

Other Remarks Ohio River at Flood Stage



2454 River Road
Cowansville, PA 16218
(724) 548-1774 office
(724) 991-3739 mobile
et.aesi@gmail.com
WBENC #2005118643

July 27, 2015

Terry Dusz
4K Industrial Park, LLC
1001 Main Street
Martins Ferry, Ohio 43935

Subject: Groundwater Monitoring Well Report
Martins Ferry, Ohio site

Dear Terry:

This report conveys the results of a groundwater investigation conducted at the 4K Industrial water treatment facility in Martins Ferry, OH during April through June 2015. The purpose of the investigation was to document groundwater quality conditions in the vicinity of the facility prior to start up. Field work for the investigation included drilling and installation of three groundwater monitoring wells, well development, and collection of groundwater samples for laboratory analysis. A map showing well locations is provided as Figure 1.

The wells were installed into the unconsolidated sediments natural to the Ohio River Valley using a hollow-stem auger drilling method. As the boring for each well was advanced to the target depth, soil samples were collected at each 5-foot depth interval. Soils were field logged to identify soil type, degree of water saturation, and other observable characteristics. Soil boring logs are provided in Attachment A.

The typical soil layering sequence encountered was clayey sandy silt overlying fine to medium silty sand. A consistent groundwater zone was identified in the sand layer. A surface layer of fill materials was encountered at locations 4K-1 and 4K-2.

Monitoring wells were constructed using 2-inch diameter SCH 40 PVC well screen and casing. The screened section of each well is 15 feet long, to accommodate the natural groundwater level fluctuations in the alluvial water bearing zones along the Ohio River. Well screens were gravel-packed through the augers to a minimum height of 2 ft. above the top of the slots. Bentonite pellets were used to seal the well bores. Each wellhead was equipped with a locked steel protective cover that was cemented in place and painted safety yellow. Finished well depths are 44 ft. for 4K-1 and 4K-2, and 33 ft. for 4K-3. Well construction logs are provided in Attachment B.

Following installation, the wells were developed to remove silt and sand accumulated in the well bottom as a result of ground disturbance during the drilling process. Approximately 50 gallons of groundwater was removed from each well using a combination of hand bailing and pumping. The wells were developed to ensure representative and turbid-free groundwater samples could be obtained for lab analysis.

Within 24 hours of development, the wells were sampled for Ohio EPA Division of Drinking and Groundwater parameters, including general chemistry, volatile organic compounds (VOCs), metals and radiologicals. Groundwater samples were sent to Tra-Det Laboratories in Wheeling, WV for analysis. Tra-Det Lab sent the VOC samples to REIC Laboratory in Beaver, WV. Laboratory data reports are included in Attachment C.

Laboratory results for groundwater are summarized in Tables 1, 2 and 3. Collectively, these data comprise the pre-start-up dataset for the water treatment facility. Ohio EPAs maximum contaminant level (MCL), secondary MCL, and action level (AL) standards are shown for reference. Martins Ferry city well metals and radiologicals data are included on Tables 1 and 3.

For the inorganic compounds and metals shown in Table 1, most of the results are below standards. Low-level detections of select metals (arsenic, cadmium, lead, silver) may be related to higher filterable residue content, which is commonly a reflection of clay-sized sediment in the samples. Other parameters, such as chloride, sulfate, iron and manganese are elevated relative to secondary standards, with higher levels measured in 4K-2 relative to the other two wells. Chloride, sulfate, iron and manganese occur naturally in groundwater. Elevated levels may be related to past industrial activity in the Martins Ferry area. Thallium is present in all three wells. Thallium is a component of ore, and may be present due to historical ore processing in the region.

Analytical results for VOCs are all below detection (see Table 2).

Radiological analyses included gross alpha, gross beta, radium-226 and radium 228 (see Table 3). Laboratory results indicate radiologicals are present mainly at very low levels, except for gross alpha in 4K-2. Well 4K-2 should be resampled for radiologicals to confirm the validity of the initial result.

Thank you for the opportunity to work with 4K Industrial on this project. If you should have any questions or need additional information, please contact me at the number listed below or et.aesi@gmail.com.

Sincerely,

ALLEGHENY ENVIRONMENTAL SERVICES, INC.

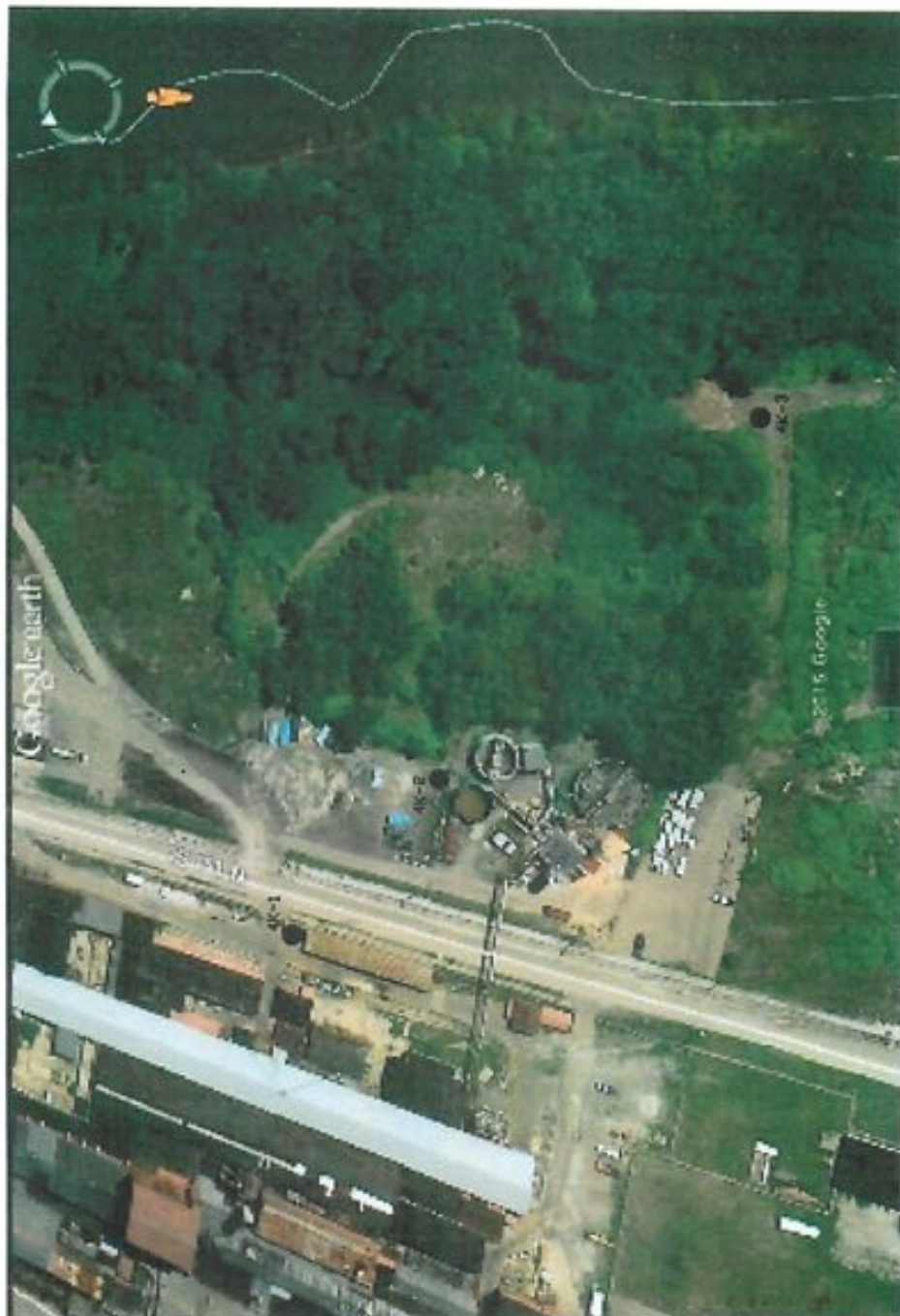


Edie Tamburro, President

- Monitoring Well Chem. Treat Area
- * Down Gradient Monitoring Wells (3)



DRAWING NO.	DATE	FILE NO.
<p>MONITORING WELL LOCATIONS</p> <p>OF INDUSTRIAL FACILITY</p> <p>WATSON PROPERTY, (493)</p> <p>LEAD: Environmental Health, Inc.</p> <p>Engineered Summary: Site/Phase: Remediation</p>		



DRAWING NO. 4K-001 FIGURE NO. 1

MONITORING WELL LOCATIONS

4K INDUSTRIAL FACILITY
MARTINS FERRY, OHIO

ALLEGENT ENVIRONMENTAL SERVICES, INC.
Environmental Assessment, Regulatory Compliance, Remediation

TABLE 1
4K INDUSTRIES
Martins Ferry, Ohio
INORGANIC CHEMICALS (IOCs) TEST RESULTS

Page 1 of 1

Monitoring Point ID	Units	MCL / Standard	Martins Ferry City Well	Reporting Limit	4K-1	4K-2	4K-3
Date Sampled	m-d-yr		04/21/2011		06/15/2015	06/15/2015	06/15/2015
Field Parameters:							
Flow	gpm				4	4	4
pH	S.U.	7.0 - 10.5 SMCL			6.32	5.90	5.96
Temperature	deg. C				16.3	15.1	14.5
Laboratory Parameters:							
Alkalinity Total, as CaCO ₃	mg/l	No standard	143	None	247	93.4	99.9
Antimony Total, Sb	mg/l	0.006	<0.004	0.004	ND (<0.01)	ND (<0.01)	ND (<0.01)
Arsenic Total, As	mg/l	0.01	<0.003	0.003	0.02	0.0106	0.0039
Barium Total, Ba	mg/l	2	0.0378	0.3	0.123	0.0396	0.0247
Beryllium Total, Be	mg/l	0.004	<0.001	0.001	ND (<0.001)	ND (<0.001)	ND (<0.001)
Cadmium Total, Cd	mg/l	0.005	<0.001	0.001	0.0057 J	0.0124	0.0066 J
Calcium Total, Ca	mg/l	No standard	90.2	None	281	341	163
Chloride, Cl	mg/l	250 SMCL	60.6	None	154	403	80.1
Chromium Total, Cr	mg/l	0.1	<0.005	0.01	0.0092 J	0.0234 J	ND (<0.004)
Copper Total, Cu	mg/l	1.3 AL	<0.050	0.05	0.0117	0.0091 J	0.0113
Cyanide, CN	mg/l	0.2	<0.010	0.002	ND (<0.005)	ND (<0.005)	ND (<0.005)
Fluoride Total, F	mg/l	4	0.26	0.0005	ND (<0.034)	ND (<0.034)	0.104 J
Iron Total, Fe	mg/l	0.3 SMCL	1.37	None	99.0	175	39
Lead Total, Pb	mg/l	.015 AL	<0.005	0.005	0.0136 J	.0235 J	ND (<0.01)
Magnesium Total, Mg	mg/l	No standard	19.1	None	59.5	122	18.9
Manganese Total, Mn	mg/l	.05 SMCL	0.503	None	21.7	70.2	22.2
Mercury Total, Hg	mg/l	0.002	<0.005	0.0005	ND (<0.0002)	ND (<0.0002)	ND (<0.0002)
Nickel Total, Ni	mg/l	No standard	<0.010	0.02	ND (<0.003)	0.0964	0.0796
Nitrate, NO ₃ (as N)	mg/l	10	<0.10	0.0005	0.130 J	0.327	0.126 J
Nitrate-Nitrite, NO ₃ -NO ₂ (as N)	mg/l	10	<0.10	0.0005	0.130 J	0.327	0.126 J
Nitrite, NO ₂	mg/l	1	<0.10	0.0001	ND (<0.024)	ND (<0.024)	ND (<0.024)
pH, Lab S.U.	S.U.	7.0 - 10.5 SMCL	7.24	None	6.14 H	5.57 H	6.07 H
Residue, Total Filt (Diss)	mg/l	500 SMCL	508	None	1,440	2,520	856
Selenium Total, Se	mg/l	0.05	0.0103	0.005	0.0004 J	0.0002 J	0.0002 J
Silver Total, Ag	mg/l	0.1 SMCL	<0.010	None	0.0035	0.0122	0.0033
Sodium Total, Na	mg/l	No standard	60.2	None	32.5	53.2	13.5
Sulfate, SO ₄	mg/l	250 SMCL	170	None	647	1,300	391
Thallium Total, Tl	mg/l	0.002	<0.0015	0.0015	0.317	1.46	0.509
Zinc Total, Zn	mg/l	5	0.0188	None	ND (<0.005)	0.541	1.32

J - Analyte detected below quantitation limits

II - Holding times for preparation or analysis exceeded

MCL - Maximum Contaminant Level

SMCL - Secondary Maximum Contaminant Level, Advisory limit only

AL - Action Level

TABLE 2
4K INDUSTRIES
Martins Ferry, Ohio
VOLATILE ORGANIC CHEMICALS (VOCs) TEST RESULTS

Monitoring Point ID			4K-1	4K-2	4K-3
	<i>Units</i>	<i>Minimum Detection Limits</i>			
Date Sampled	<i>m-d-yr</i>		06/15/2015	06/15/2015	06/15/2015
Field Parameters:					
Flow	<i>gpm</i>		4	4	4
pH	<i>S.U.</i>		6.32	5.90	5.96
Temperature	<i>deg. C</i>		16.3	15.1	14.5
Laboratory Parameters:					
Benzene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Carbon Tetrachloride	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Chlorobenzene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
1,2-Dichlorobenzene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
1,4-Dichlorobenzene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
1,2-Dichloroethane	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
1,1-Dichloroethene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
cis-1,2-Dichloroethene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
trans-1,2-Dichloroethene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
1,2-Dichloropropane	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Ethylbenzene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Methylene chloride	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Styrene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Tetrachloroethene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Toluene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
1,2,4-Trichlorobenzene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
1,1,1-Trichloroethane	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
1,1,2-Trichloroethane	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Trichloroethene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
Vinyl chloride	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
o-Xylene	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND
m,p-Xylene	<i>ug/l</i>	<i>0.500</i>	ND	ND	ND
Xylenes (Total)	<i>ug/l</i>	<i>NA</i>	ND	ND	ND
Methyl tert-butyl ether	<i>ug/l</i>	<i>0.250</i>	ND	ND	ND

TABLE 3
4K INDUSTRIES
Martins Ferry, Ohio
RADIOLOGICAL TEST RESULTS

Page 1 of 1

Monitoring Point ID	Units	MCL / Standard	Martins Ferry City Well	Reporting Limit	4K-1	4K-2	4K-3
Date Sampled	m-d-yr		06/03/2011		06/15/2015	06/15/2015	06/15/2015
Field Parameters:							
Flow	gpm				4	4	4
pH	S.U.				6.32	5.90	5.96
Temperature	deg. C				16.3	15.1	14.5
Laboratory Parameters: Value (\pm Uncertainty)							
Gross Alpha/Beta Analysis							
Alpha, Gross	pCi/L	15 / 5 AL	8.19 (\pm 1.91)	3	13 (\pm 4.88)	2280 (\pm 500)	26.3 (\pm 162)
Beta, Gross	pCi/L	4 nrem/yr / 50 pCi/L AL	19.24 (\pm 1.75)	4	4.09 (\pm 3.13)	ND (\pm 221)	ND (\pm 136)
Radium-226 Analysis							
Radium-226 Yield	pCi/L	5 (sum with 226 result)	<1 (\pm 0.54)	1	2.55 (\pm 0.98) 1.00	4.28 (\pm 1.24) 1.00	3.32 (\pm 1.16) 1.00
Radium-228 Analysis							
Radium-228 Yield	pCi/L	5 (sum with 228 result)	1.19 (\pm 0.45)	1	10.5 (\pm 6.74) 1.00	8.72 (\pm 8.55) 1.00	20.9 (\pm 10.8) 0.770

MCL = Maximum Contaminant Level
AL = Action Level

VISUAL CLASSIFICATION OF SOILS

BORING NO. 4K-1
PAGE 1 OF 2

PROJECT NO.:	PROJECT NAME: WATER TREATMENT PLANT		
ELEVATION:	LOCATION: MARTINS FERRY, OH		
ENGINEER/GEOLOGIST: E. Tamburro	GWL: DEPTH	DATE/TIME	DATE: 4/24/2015
DRILLING CO.: Rindfuss Drilling	DEPTH	DATE/TIME	DATE STARTED: 4/24/2015
DRILLER: Bob Rindfuss	CASING SIZE / DEPTH: 2" PVC /		DATE COMPLETED: 4/24/2015
DRILLING METHODS: 4 1/4" Hollow Stem Auger / SPLIT SPOON			DATE BACKFILLED:

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER (ft.)	RECOVERY (ft.)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
5				6" COVERED AT SURFACE			
7		1 1/2	0.7	BLACK GRANULAR CLAYER FILL, MOIST, LOOSE			
12		1 1/3	1.2	GRAY AND BROWN CLAYEY SANDY SILT, COHESIVE OCCASIONAL ROCK FRAGMENT WET, LAST 0.4', MOIST			
17		1 1/3	1.7	GRAY CLAYEY SILT, COHESIVE, MOIST UNIFORM TEXTURE			
22		2 4/5	1.6	GRAY CLAYEY SILT, AS ABOVE, SANDY SILT, COHESIVE WET, HIGHLY COHESIVE			
27	420 in Spoon	2 2/3	1.2	SAME AS ABOVE, WET			

NOTES:

APPEARS TO BE WATER IN SILT AT 20 FT. (APPROX.)

VISUAL CLASSIFICATION OF SOILS

BORING NO. 4K-1
PAGE 2 OF 2

PROJECT NO.:	PROJECT NAME: <u>WASTEWATER TREATMENT PLANT</u>		
ELEVATION:	LOCATION: <u>MARTINS FERRY, OH</u>		
ENGINEER/GEOLOGIST: <u>E. TAMBURO</u>	CWL: DEPTH	DATE/TIME	DATE: <u>4/24/15</u>
DRILLING CO.: <u>Rindfuss Drilling</u>	DEPTH	DATE/TIME	DATE STARTED: <u>4/24/15</u>
DRILLER: <u>Bob Rindfuss</u>	CASING SIZE / DEPTH: <u>2" Ø PVC /</u>		DATE COMPLETED: <u>4/24/15</u>
DRILLING METHODS: <u>4 1/4" ID Hollow Stem Auger / SPLIT SPOON</u>			DATE BACKFILLED: <u>4/24/15</u>

DEPTH (FT)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER (G.V.)	RECOVERY (FT)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
32	NO H ₂ O (G.V.)	1 1/2 / 2 / 3	2.0	SAME AS ABOVE COLUMN BROWN AND GRAY SILT CLAY WITH LESS ABUNDANT, VERY MOIST			
35	NO H ₂ O (G.V.)	1 / 1 / 3 / 4	2.0	GRAY CLAYEY SANDY SILT STRATIFIED WITH ALTERATING LAYERS OF CLAYEY SILT AND CLAYEY SAND, MOIST TO VERY MOIST, COHESIVE			
42	NO H ₂ O (G.V.)	4 / 8 / 17 / 20	1.1	GRAY FINE TO MEDIUM SAND WELL SORTED, SATURATED (0.8) GRAY FINE TO COARSE SAND, LOCAL PEBBLES AND COBBLES, SATURATED (0.8)			
45				END OF BORING AT 45 ft.			

NOTES:

SET 2" Ø SCH 40 PVC MONITORING WELL AT 45 FT. DEPTH
 15 FT. 2" Ø PVC, 0.010" SLOT WELL SCREEN (30 IN 45 FT.)
 CLEAN SILICA GRAVEL PACK (20 TO 45 FT.)
 BRINDVITE PELLET SEAL (2 TO 20 FT.)
 LOCKABLE STEEL PROTECTIVE COVER
 WELL CASING STICK UP = 2.0 FT.

VISUAL CLASSIFICATION OF SOILS

BORING NO. 4K-2
PAGE 1 OF 2

PROJECT NO.:	PROJECT NAME: WATER TREATMENT PLANT		
ELEVATION:	LOCATION: MARTINS FERRY, WV		
ENGINEER/GEOLOGIST: E. Tamburro	GWL: DEPTH	DATE/TIME	DATE: 4/23/15
DRILLING CO.: Rindfuss Drilling	DEPTH	DATE/TIME	DATE STARTED: 4/23/15
DRILLER: Bob Rindfuss/Adam	CASING SIZE / DEPTH: 2" PVL		DATE COMPLETED: 4/23/15
DRILLING METHODS: 4 1/4" ID HOLLOW STEM AUGER / SOIL SPOON			DATE BACKFILLED: 4/23/15

DEPTH (ft)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER (6")	RECOVERY (ft)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
5				SURFACE IS FILL MATERIAL WELL LOCATED IN FORMER COAL STOCKPILE AREA, SOME COAL EVIDENT IN AUGER CUTTINGS			
7		1/1/2/4	0.3	DARK BROWN SAND/GRAVEL/ROCK FILL, MOIST NOTE: POOR RECOVERY DUE TO ROCK, CONCRETE IN FILL			
10							
12		10/18/4/2	1.2	SAME DARK BROWN SAND/GRAVEL/ROCK FILL AS ABOVE, BRICK FRAGMENTS, MOIST (0.3'), GRAY SILT COHESIVE, UNIFORM TEXTURE, WELL SORTED, MOIST, FINE, ROUNDED GRAVEL LAST 0.5'			
15							
17		2/3/5/6	1.7	LIGHT BROWN CLAYEY SILT, LIGHT GRAY MOTTLES, COHESIVE, OXIDATION STAINING, WELL SORTED, MOIST			
20							
22	H ₂ O in SPOON	2/3/3/2	2.0'	SAME CLAYEY SILT AS ABOVE, COHESIVE, MOIST (0.9'); LIGHT BROWN CLAYEY SANDY SILT COHESIVE, SORT, WET (1.1')			
25							
27	7" H ₂ O on RODS	1/1/1/2	2.0'	SAME CLAYEY SANDY SILT AS LAST 1-1' ABOVE, WET, COHESIVE			
30							

NOTES: APPEARS TO BE PERCHED WATER IN SILT AT APPROX. 21'

VISUAL CLASSIFICATION OF SOILS

BORING NO. 4K-2
PAGE 2 OF 2

PROJECT NO.:	PROJECT NAME: WATER TREATMENT PLANT		
ELEVATION:	LOCATION: MARTINE FERRY, OH		
ENGINEER/GEOLOGIST: C. Tamburello	GWL: DEPTH	DATE/TIME	DATE: 4/23/15
DRILLING CO.: Rindfuss Drilling	DEPTH	DATE/TIME	DATE STARTED: 4/23/15
DRILLER: Bob Rindfuss	CASING SIZE / DEPTH: _____ / _____		DATE COMPLETED:
DRILLING METHODS: 1 1/4" IQ Hollow Stem Auger / Split Spoon			DATE BACKFILLED:

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER (ft.)	RECOVERY (ft.)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
30		1 1/2 / 4	2.0	SAME LIGHT BROWN CLAYEY SANDY SILT AS ABOVE, COHESIVE, WET			
32							
35							
37	NO H ₂ O IN AUGERS	1 1/2 / 2	2.0	GRAY CLAYEY SANDY SILT INTERLAYERED WITH GRAY SILTY FINE SAND SAND LAYERS ONLY SLIGHTLY COHESIVE SLIGHTLY SATURATED, HIGHLY STRATIFIED SEDIMENT			
40							
42	H ₂ O IN SPOON	1 1/3 / 8	1.4	GRAY SILTY SAND, SOFT, SATURATED (0.7); GRAY, SILTY FINE TO MED SAND AND FINE TO COARSE GRAVEL AND PEBBLES, SATURATED (0.5); GRAY SILTY SAND, SATURATED (0.2)			
45'							
				END OF BORING AT 45'			

NOTES:

SET 3" Ø PVC SCH 40 MONITORING WELL
 15 FT 2" Ø PVC SCH 40 SCREEN (0.020" SLOI) AT 30 to 45'
 CLEAN SILICA GRAVEL PACK AT 20 to 45 ft
 BENTONITE PELLET (MED HIRM) AT 2 to 28 ft
 CEMENTED WALKABLE STEEL WELL COVER
 2 BUMPER POSTS
 WELL CASING STICK UP = 2.0 ft.

VISUAL CLASSIFICATION OF SOILS

BORING NO. 4K-3
PAGE 1 OF 1

PROJECT NO.:	PROJECT NAME: WATER TREATMENT PLANT
ELEVATION:	LOCATION: MARTINUS FERRY, OH
ENGINEER/GEOLOGIST: E. Tambores	DATE: 4/23/2015
DRILLING CO.: Rindfuss Drilling	DATE STARTED: 4/23/15
DRILLER: Rob Rindfuss	DATE COMPLETED: 4/23/15
DRILLING METHODS: 4 1/4" Hollow Stem Auger / Split Spoon	DATE BACKFILLED: 4/23/15

DEPTH (ft.)	SAMPLE TYPE & NO.	BLOWS ON SAMPLER PER (ft.)	RECOVERY (ft.)	DESCRIPTION	USCS SYMBOL	MEASURED CONSISTENCY (TSF)	REMARKS
5	2" Ø SPLIT SPOON STAINLESS STEEL SAMPLER 12" LONG						
7		2/3/5/5	1.8	MEDIUM BROWN SILT, WELL SORTED, COHESIVE, MOIST			
10							
12		2/2/4/3	1.6	SAME AS ABOVE MOIST, slightly sandier but very moist last 0.4'; SAND VERY FINE SIZE; sample uniform and cohesive over entire interval			
15							
17		2/2/3/4	1.6	SAME AS LAST 0.4' above, very moist cohesive (1.8) medium brown sand (0.2) silt very moist (0.2) medium brown fine sand, trace silt slightly cohesive, very moist (0.3)			
20							
22	H2O SPOON	1/0/0/2	1.5	MEDIUM BROWN FINE SAND STRATIFIED WITH SILTY INTERLAYER, WATER SATURATED, ONLY MILDLY COHESIVE where siltier (1.0) MEDIUM BROWN SANDY SILT COHESIVE, very moist (0.5)			
25							
27	45' H2O ROD	1/1/1/4	1.6	MEDIUM BROWN SILTY FINE SAND INTERLAYERED WITH SANDY SILT, WATER SATURATED			
30							
32	H2S ODOR	1/3/5/5	1.6	SAME STRATIFIED SILTY SAND/ SANDY SILT AS ABOVE, COLOR CHANGED TO GRAY, WATER SATURATED (1.3) GRAY FINE TO MEDIUM SAND, NON-COHESIVE, SATURATED (10.3)			END OF BORING AT 33'

NOTES:

SET 2" Ø SCH 40 PVC MONITORING WELL WITH 15.0 ft. OF 2" Ø SCH 40 PVC SCREEN, 0.030" SLOT SIZE (18 to 33 ft.)
CLEAN SILICA GRAVEL PACK (16 to 33 ft.)
BENTONITE PELLET WELL SEAL (2 to 16 ft.)
CEMENTED LOCKABLE STEEL WELL COVER
2 bumper posts
Well casing stick up = 2.5'